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ARTICLE I.

SCHMIDT ON YELLOW FEVER. Read before the Chicago Biological Society, April 6, 1881. By S. V. CLEVENGER, M.D.

The medical world is not aware that an era has been reached in general pathology, but it is indeed true. The justly distinguished scientist and physician, H. D. Schmidt, Pathologist of Charity Hospital, New Orleans, has gathered together the results of a labor extending through a number of years, in a volume entitled, "The Pathology and Treatment of Yellow Fever."

To glean an idea of the bearing this forthcoming work will have upon science and medicine, and to convince you of its value as a contribution to pathology in general, I must be allowed to present a little biography of its author, indicative of the route by which he approached his subject and his acquisition of the necessary scientific, literary and logical training, prefacing the little history by the statement that it required considerable effort to gather together the facts, and only by a threat of publishing the incomplete and less accurate details, could Dr. Schmidt be induced to revise the biography and furnish a list of his works.

Leaving aside his unguided studies of natural history during his boyhood, his systematic education began in 1853, with anatomy, chemistry and physiology, to which subsequently was added botany and comparative anatomy. His inherent inclination to the study of Nature in general led him to medicine, so he was in no hurry to obtain a diploma, and in consequence left the more practical branches of our profession untouched until 1856, and two years later he graduated in medicine. His familiarity from boyhood with the three great living languages, facilitated his acquisition of a classical education. Anatomy being his favorite study, he pursued it in all its various departments, special and microscopical, experimented in minute injections until he had become a master, made all sorts of preparations, and thus could not fail to become an anatomist in the fullest sense of the word.

Under the auspices of his good friend, Prof. Joseph Leidy, of Philadelphia, he constructed many large anatomical models, which may now be seen in the old University of Pennsylvania. These models won for him a wide reputation. Aided by Prof. Samuel Jackson, of that school, he entered upon microscopical anatomy in the spring of 1857, Prof. Leidy placing his "Natchet" microscope at his disposal. In Schmidt's paper on the hepatic lobule will be found a description of his microtome, invented for the original purpose of making sections of spinal marrow, but aiding him afterwards in discovering the biliary capillaries as the commencement of the hepatic duct. (*American Journal of Medical Science*, January, 1859.)

Queckett's section cutter being only for wood, it is probable that Schmidt's microtome was the first ever constructed for making sections of soft tissues. In 1857 he made a considerable number of experiments and observations for Prof. Jackson, on living animals—dogs, cats and hogs—concerning the digestion of the muscular fibers in the alimentary canal. After graduation, Schmidt was appointed Leidy's assistant and prosector, the same position which the latter once held under Prof. Horner. At the same time Schmidt acted as assistant demonstrator under Dr. Wm. Hunt. During 1858 and 1859 he was engaged in his researches into the histology of the liver, for which work he

invented the most useful and perfect injecting apparatus that ever has been seen.

In February, 1860, Schmidt left Philadelphia, being called to the Medical college of Alabama, by his friend, the celebrated Dr. J. C. Nott, of Mobile. Soon after he was induced to accept the position of prosector and demonstrator of anatomy in the New Orleans School of Medicine, at $1,500 per year (a large sum at that time), and he thus became a permanent resident of New Orleans. The civil war broke out, and a blank of five years was made in Schmidt's scientific career. Circumstances (above which the best and strongest are unable to swim, say what we may) found him in the Confederate army in the capacity of surgeon, without books or instruments, cut off from the scientific world. He spent his time in the discharge of his professional duties in hospital and camp, or in the neighboring forests in the study of plants and animals, often astonishing his surgeon-colleagues by his dissections of spiders or bony ears of mammals and amphibia by means of his pen-knife.

Upon returning to New Orleans, he was appointed Pathologist of the Charity Hospital, and besides this, he temporarily occupied the chair of Physiology in the New Orleans Medical School for Dr. A. C. Holt, who was prevented from lecturing by sickness. In the spring of 1866, Schmidt was attacked by rheumatism, which compelled him to resign his hospital position. In May, 1867, he regained health sufficiently to recommence general practice, and resume his favorite scientific studies, which he continued till 1874, when his old enemy, rheumatism, overtook him again, laying him up for seven long months and disabling him forever for the active duties of his profession. Dr. Schmidt is so very much disabled that it is positively painful to watch him endeavoring to make his old time delicate dissections and microscopic manipulations. Nevertheless he manages successfully to make as good sections and slides as any microscopist, and his drawings are faultless, both as to faithfulness to nature and artistic finish. The specimens I here exhibit were made by him, and they have elicited the admiration of our Illinois Microscopical Society, Profs. J. S. Jewell, Lester Curtis, Wm. A. Hammond, E. C. Seguin, E. C. Spitzka and others.

During his prostration, Schmidt wrote his American Neurological Society paper, on the "Structure of the Nervous Tissues and their Mode of Action." In October, 1877, just as his means were exhausted, by application of the most prominent physicians of New Orleans, he was re-appointed Pathologist of Charity Hospital, and it was in this capacity that he made his more recent investigations into the pathology of yellow fever, bringing to bear upon his researches the results of observations made during previous epidemics and the great skill and learning acquired through a life-long, earnest search for truth.

Schmidt's principal papers are:

1. "On the Minute Structure of the Hepatic Lobule, Particularly with Reference to the Relationship between the Hepatic Cells and the Canals which carry off the Secretion of the latter." (Illustrated with Thirty-three Figures.) Published in the *American Journal of Medical Sciences*, January, 1859. (This paper contains his discovery of the biliary capillaries.)

2. "Researches into the Pathology and Cause of the Present Epidemic, Ordinarily Called 'Yellow Fever.'" Published in the *Southern Journal of Medical Sciences*, November, 1867. (Written during the epidemic).

3. "Microscopical Anatomy of the Human Liver. (Illustrated with Three Plates.) Published in the New Orleans *Journal of Medicine*, October, 1869, January and April, 1870.

4. "On the Origin and Development of the Colored Blood Corpuscles in Man." (Illustrated by Ten Figures.) Read before the Royal Microscopical Society of London, and published in its former organ, the *Monthly Microscopical Journal*, 1874.

5. "On the Construction of the Dark or Double-bordered Nerve Fiber. (Illustrated by Twenty-two Figures.) Published by the Royal Microscopical Society of London, *Monthly Microscopical Journal*, May, 1874.

6. "Synopsis of the Principal Facts, Elicited from a Series of Microscopical Researches upon the Nervous Tissues." Read before the Royal Microscopical Society of London, and published in the *Monthly Microscopical Journal*, July, 1874.

7. "On the Development of the Smaller Blood Vessels in the Human Embryo." (Illustrated by Nineteen Figures.) Read be-

fore the Royal Microscopical Society of London, and published in the *Monthly Microscopical Journal*, January, 1875.

8. "On the Structure of the Nervous Tissues and their Mode of Action." Published in the Transactions of the American Neurological Society, Vol. 1, 1875.

9. "The Development of the Nervous Tissues of the Human Embryo." (Illustrated by Twenty-six Figures.) Published in the *Journal of Nervous and Mental Disease*, July, 1877.

10. "The Structure of the Colored Blood Corpuscles of *Amphiuma Tridactylum*, the Frog and Man." (Illustrated by Fifty-eight Figures.) Taken as read before the Royal Microscopical Society of London, and published in the Journal of the Royal Microscopical Society, May and July, 1878.

11. "Case of Repeated Attacks of Apoplexy, with Aphasia." (Illustrated by Five Figures.) Published in the *Journal of Nervous and Mental Disease*, July, 1878.

12. "On the Structure and Function of the Ganglionic Bodies of the Cerebro-Spinal Axis." (Illustrated by Fifteen Figures.) Published in the *Journal of Nervous and Mental Disease*, January, 1879.

13. "On the Pathology of Yellow Fever." Published in the New York *Medical Journal*, February, 1879.

14. "On the Nature of the Poison of Yellow Fever and its Prevention." Published in the New York *Medical Journal*, May, 1879.

Dr. Schmidt has a host of warm, personal friends in the profession in all parts of the world. His researches are standard topics in our better class of text-books.

It is notorious that no one can succeed as a scientific man, and at the same time earn even a respectable living, without assistance. It is in obedience to the law of labor division. How is it possible for a nerve cell to exist if the blood corpuscle did not carry it oxygen, and the tissues from which it emanated afford it support? Dr. Schmidt has been so engrossed in his scientific labor that to-day he finds himself fifty-six years of age, prostrated in health, with a family to support, and very little to cheer his declining years in the way of a pecuniary outcome for work that not one man in ten million is capable of doing, and

few indeed have done so earnestly and honestly, and with such purity of motive. In a few hundred years the world will appreciate these delvers after truth, who are content with truth only and nothing else, and who in their detestation of humbuggery, avoid the conspicuousness which leads to affluence.

The merits of the work on Yellow Fever, which I here present, you may judge for yourselves.

It is through its sale by subscription and wholly upon its merits as a scientific work, and as a genuine contribution to knowledge, that some recompense is expected for this life of toil.

At a meeting of the Chicago Biological Society, April 6, 1881, after the presentation of the foregoing paper, accompanied with lithographs and microscopic slides prepared by Dr. Schmidt, extracts from his manuscript work were read, and the following resolution passed:

"*Resolved*, That the Society cordially endorse the work of Dr. Schmidt, and recommend the publication of the same by subscription under its auspices; and that its treasurer be made the treasurer of the necessary subscription fund, and be held responsible to Dr. Schmidt for all subscriptions received by the former."

It was also "*Resolved*, That Dr. Clevenger be requested to publish his paper, as read during the evening, in the CHICAGO MEDICAL JOURNAL AND EXAMINER, as preliminary to the appearance of Dr. Schmidt's work.

In accordance with the above resolution, the work of Dr. Schmidt will appear in monthly serial parts in the CHICAGO JOURNAL AND EXAMINER until completed.

The subscription price will be $3.00, *which may be sent either directly to* DR. H. D. SCHMIDT, 263½ *Canal St., New Orleans, La., or to*

ROSWELL PARK, M.D.,
Sec'y and Treas. Chicago Biological Society,
1558 Wabash Ave., Chicago.

THE

PATHOLOGY AND TREATMENT

OF

YELLOW FEVER;

WITH SOME REMARKS UPON

THE NATURE OF ITS CAUSE AND ITS PREVENTION.

BY

H. D. SCHMIDT, M.D.,

PATHOLOGIST OF THE CHARITY HOSPITAL OF NEW ORLEANS; MEMBER OF THE ACADEMY OF THE NATURAL SCIENCES OF PHILADELPHIA; OF THE AMERICAN NEUROLOGICAL ASSOCIATION; OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE; HONORARY MEMBER OF THE NEW ORLEANS MEDICAL AND SURGICAL ASSOCIATION, ETC., ETC.

With Five Illustrative Plates.

CHICAGO:
THE CHICAGO MEDICAL PRESS ASSOCIATION.
1881.

Entered according to Act of Congress, in the year 1881, by H. D. SCHMIDT, M.D., in the office of the Librarian of Congress, at Washington, D. C.

This Work I Dedicate

TO MY DISTINGUISHED PRECEPTOR AND FRIEND,

PROF. JOSEPH LEIDY, M.D.,

OF THE UNIVERSITY OF PENNSYLVANIA,

WHO FIRST TAUGHT ME THE PRINCIPLES OF EXACT SCIENCE,

AND WHOSE SYMPATHY AND KINDNESS

HAVE BEEN TO ME,

IN ALL THE CONJUNCTURES OF LIFE,

A NEVER-FAILING

Solace and Support.

PREFACE.

In preparing this Treatise on Yellow Fever, the object I have kept steadily in view, has been to draw as distinct and correct a sketch of its various pathological phenomena, and their mutual relations, as our present knowledge of the disease permits.

Though I indulge the hope that my purpose has been to some extent accomplished, I am not blind to the numerous and important gaps which are left, to be filled, hereafter, by further systematic investigations. But imperfect as the present work must, of necessity, be, I trust it will serve as a guide to the practicing physician in his efforts to master this most malignant disease.

While the observations of the clinical phenomena were chiefly made at the bedside of my private patients during several epidemics, the pathological studies were pursued, for the most part, in the dead-house and pathological laboratory of the Charity Hospital of this city; an institution which, for the study of yellow fever, probably offers more favorable opportunities than any other situated in the yellow fever zone.

Having on several occasions been disappointed by lithographers making inaccurate copies of my original pencil-drawings, I have made the attempt to lithograph the illustrations accompanying this work, upon the stone myself. Though they may not be finished as exquisitely as by the hand of a first-class professional artist, I have, at least, the satisfaction of knowing that they represent the tissues, accurately, as I observed them under the microscope.

NEW ORLEANS, LA., May, 1880.

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INTRODUCTION.

There are few infectious diseases which have engaged the interest of medical men as much as yellow fever. In consequence, the literature of this disease, beginning in the seventeenth century and extending to our time, has assumed very considerable dimensions.* But extensive as this literature appears, it has, in reality, but little advanced our knowledge of the true pathology of this disease, for the reason that the authors, especially the older ones, had contented themselves with basing their pathological theories chiefly upon the clinical phenomena observed at the bedside, or, at the utmost, upon the macroscopical examinations accompanying the autopsies, which, as may be presumed, were not always made in the systematic style and manner essential to an

* The works and monographs treating upon yellow fever, and composing the Bibliography of Dr. *La Roche's* great work on this disease, *alone*, amount to *nine hundred and seventy-five*.

accurate scientific investigation. Accordingly, the authors principally confined their writings to a description of the history of the disease, or to the observations which they made at the bedside, and from which they formed their various speculative theories as to its probable cause.

From these remarks, however, it must not be inferred that our predecessors were inferior students or observers, for their clinical observations have in most points been corroborated by our own; their deficiency of observation was only due to want of acquaintance with those important pathological facts, elicited chiefly by the aid of the microscope in more recent times; for, twenty-five years have hardly elapsed since this instrument was first used to demonstrate the structural changes taking place in various organs during the course of yellow fever. In judging, therefore, of the merits of our predecessors, the rapid progress made in our own time in human physiology and pathology, upsetting many of the older theories, must be taken into consideration. Thus, the former theories of the processes of fever and inflammation have been placed upon different bases, greatly by the labors of Virchow. The febrile process was still shrouded in mystery, until, not many years ago, by numerous experiments relating to the interchanges of matter and the production of heat in the blood during this process, more light was thrown upon it. With the knowledge of modern pathology, therefore, the nature of yellow fever should now be more successfully studied, and means be devised to mitigate, at least, the disease, and deprive it of its terror. The systematic and thorough labors of European pathologists into the pathology and treatment of small-pox, typhus and typhoid fever, diphtheria, and other infectious diseases, may serve as an example. The late epidemics at New Orleans and Memphis have furnished sufficient material for such studies; and though we earnestly hope that these calamities will not be witnessed again, we must presume that sporadic cases of yellow fever will always occur to serve for more thorough and systematic studies than have hitherto been made.

The future studies into the pathology of yellow fever, however, in order to be productive, should be made with sufficient accuracy and system, as otherwise they could only give rise to false im-

pressions and confusion. The clinical phenomena of the individual cases, particularly the comparative state of the pulse and temperature, the gastric and nervous phenomena, the apparent condition of the bowels and bladder, and the frequency and character of the discharges from the latter organs should be closely observed and carefully noted, in order to be accurately compared with the pathological changes met with in the various organs after death. It is only from investigation of this kind, systematically pursued with the necessary accuracy of observation by trustworthy and experienced pathologists, who are, besides, thoroughly acquainted with the normal structure of the organs, that additional facts may be elicited. Such labors, however, are not as easily and as readily performed as is imagined. The possession and the knowledge of handling a microscope do not suffice for the correct recognition and determination of pathological changes, nor do they qualify every microscopic operator for labors as important as these; for, besides the experience essential to an accurate examination, the microscopist should also possess the necessary knowledge and experience in the proper preparation of the tissues, in order to preserve their integrity, or render them otherwise fit for microscopical examination. This knowledge is only possessed by a comparatively small number of those who use the microscope. Besides this, the investigator should possess a free and unbiased judgment, so that he may be able to look upon things as they really are, and examine the subject from different sides and in various manners, before he takes up the pen. Many false statements have been made for the want of the proper qualification for accurate scientific research, and sometimes, I am sorry to say, have been made for the sole object of public notoriety, the common tendency of the day. In such cases, much honest labor is required to remedy the confusion, and to erase the false impressions made upon the medical mind by inconsiderate and erroneous statements.

It must be obvious to every rationally thinking mind, that for the mitigation or prevention of yellow fever, an intimate acquaintance with the pathology of this disease is absolutely necessary, and must form the basis of all inquiries or investigations, made in relation to its cause. It is for the general want of this thorough

knowledge that so many speculative theories have arisen, concerning the nature of the cause of this disease. To obtain a more definite idea of the nature of the cause, however, is not the only object of acquiring a correct knowledge of the pathology of the disease, for there is another of more vital moment depending upon it, viz., its *rational treatment.*

Though in the more recent epidemics of yellow fever the treatment pursued by the better educated physicians has been more rational and less empirical than in former times, it cannot be denied that during an epidemic, when the demand for doctors is unusually great, a considerable portion of the medical forces called into requisition for treating and curing the many hundreds of cases, are but very imperfectly prepared for the proper discharge of such a duty; this portion of the medical profession, however, might be better qualified if they were a little more acquainted with the true pathology of the disease, a knowledge upon which they could more safely rely in the selection of their remedies than upon too great confidence in their materia medica. And it is the earnest desire of counteracting the pernicious influence of quackery, prevailing to a considerable extent during each epidemic of yellow fever, and which cannot be but humiliating to the better part of the medical profession, that particularly prompts me to write this treatise. For this reason, no space will be wasted in a description of the history of the disease, or of the various epidemics which have prevailed in the different localities of the globe, for these subjects have been commented on so often as now to be familiar to every physician and layman. On the contrary, I shall confine myself to practical points, which directly bear upon the final mitigation or amelioration of the disease, and take the reader at once to the bedside, where he may study the clinical phenomena. From the sick-room, I shall take him to the dead-house to witness the macroscopical examination of the organs by the autopsy, and thence to the pathological laboratory, to obtain a knowledge of the microscopical pathological changes which, during the course of the disease, have taken place in the various tissues and organs. After being thoroughly acquainted with these facts, we are ready to enter into a comparison of the clinical phenomena with the

pathological changes of the organs found after death, and synthetically to build up a general pathology, to be followed by a study of the probable nature of the cause, and the rational treatment of the disease. Lastly, after having thus studied and determined the character of yellow fever, and furthermore considered all points relating to it, we may venture to make a few remarks on its prevention.

CLINICAL PHENOMENA, OBSERVED DURING THE COURSE OF THE DISEASE.

Most authors state that an attack of yellow fever rarely announces itself by any prodromal symptoms, but, in most cases, rather takes the patient by surprise. There are, nevertheless, many cases in which the fever is preceded by certain initiatory symptoms, similar to those observed in other infectious diseases, and consisting in a general feeling of uneasiness or discomfort, a want of the usual appetite, a certain degree of lassitude, more or less headache, etc., symptoms depending upon a general depression of the nervous system, and due to the action of the specific poison of the disease. In this condition the patient may remain for many days, especially when the disease prevails in the form of an epidemic, and when his mind is troubled with the cares and duties of family or friends, or by the general suffering and misery of which he is a daily witness,—or, he may succumb after the lapse of only a few hours. Nor is there any particular time for the insidious attack to take place. The patient may be surprised in the morning, or during the day, while engaged in business, or in the evening, and even during sleep. Although in most instances the disease appears suddenly, I am inclined to think that this phenomenon is more apparent than real, and, with the exception of very slight ephemeral cases, it is more probable that the fever is generally preceded by some prodromal phenomena, which, slight as they may be, announce its approach, especially in cases of a more severe and typical character. As the physician rarely observes the disease at the moment when the patient is first conscious of it, these forebodings, the prodromes, are usually overlooked—the patient himself not having been aware of them, as his mind was perhaps too much engaged with

other matters. Thus, children are frequently attacked while playing with their toys, unconscious of the enemy who steals upon them and threatens their life; and, in many instances, the parents are not warned of the danger until they perceive the flushed face and heated skin of their child. It is generally accepted that in yellow fever, as in other infectious diseases, there is a period of incubation, which, commencing with the time of the absorption of the poison by the organism, may vary in length from a few hours to a number of days, or even weeks, during which time the poison, by increasing in quantity, is, so to say, getting ready for the attack. We may justly presume that such a period really exists, as there is no positive evidence that the fever ever suddenly appeared immediately after the exposure of the patient to the influence of the noxious poison; and, furthermore, that it appears quite improbable that the same poison should, during this whole period, remain dormant, without giving rise to any external phenomena indicating its presence in the system.

However slight or severe the prodromal phenomena may be, the real attack of the disease commences with the first symptoms of the febrile process. In most cases, perhaps, the disease is ushered in by an alternate sensation of chilliness and heat, associated with dryness of the skin; though many cases commence with a decided rigor. At the same time the patient suffers with pains in the head, back and limbs. The headache, which, to a slight extent, may already have existed as one of the prodromes, is chiefly confined to the forehead and temples—from which localities it may extend in an inferior degree over the rest of the head—and seems to be peculiar in character. The pain I experienced, even during a mere ephemeral attack of yellow fever, which I had, appeared to me more deeply seated than the neuralgic or rheumatic cephalalgia, from which I had occasionally suffered for a number of years; the sensation was more of a stinging or formicating nature. In most cases, the pyrogenetic or cold stage is of short duration, for soon the sensation of cold commences to alternate with one of heat, the latter predominating gradually over the former,—while a simultaneous rise of the temperature finally leads to the establishment of the hot stage.

Now, conscious of his state and confined to his bed, the patient presents an appearance of alarm and anxiety; he is restless, his face is flushed and his eyes appear muddy, owing probably to a slight œdematous swelling of the conjunctiva, produced by hyperæmia of that membrane. The tongue, at this stage, is, in many cases, found covered by a white, cream-like film, in others by a thin yellowish fur, while the point and edges remain free and are of a bright scarlet tint. As the disease progresses, the fever becomes more intense; the skin is very hot and dry; its temperature, though varying in different cases, always rising to 102–104° F. in the axilla. The pulse is full and hard, averaging from 100 to 130 beats per minute, the respiration hurried, frequently irregular. The pains in the head, back, muscles and joints of the limbs become more severe. The spinal pain, which is confined to the lumbar region, whence it may extend to the iliac portions, or to the whole of the pelvis, becomes almost intolerable, interfering with the rest of the patient, who, in seeking comfort, constantly changes his position in bed from one side to the other. Sometimes these symptoms are accompanied by gastric troubles, as nausea, and even vomiting of mucous or bilious matters, though, in general, the latter do not appear before the second or third day.

Accompanied by the above symptoms, the fever generally runs its course without abatement during the first day and night; but, severe as these symptoms may appear, there are, nevertheless, a considerable number of cases in which a favorable turn of the disease may already be observed on the day succeeding. In these cases the patient, usually after some free alvine and urinary evacuations, caused either by a simple effort of nature or by the effect of medicine previously administered, commences to perspire in the course of the night, and feels considerably relieved from his sufferings in the morning. At the same time, the pulse and temperature have considerably descended, so that before another night sets in the fever may have entirely subsided, leaving the patient in a state of nervous debility from which he may soon recover. These cases represent the *ephemeral* form of yellow fever, accompanied from its first appearance by violent symptoms, which, however, speedily subside without

leaving any serious traces behind. My own case was one of this kind.

But, in the majority of cases, the fever does not abate so soon, but continues to the third or fourth, sometimes even to the fifth day. The temperature, then, may still rise higher, to from 105–107° F., in exceptional cases even higher, while the fall of the pulse, ordinarily commencing on the second day, generally reaches the normal standard on the fifth or sixth day, and frequently even descends still lower. Gastric trouble, also, consisting in nausea, and a constant inclination to vomiting, if not present already, now commences. Generally, there is a sensation of a dull aching pain, or pressure in the epigastric region, arising from the irritation of the mucous membrane of the stomach, and caused by the now beginning hyperæmia of this organ; the nausea and inclination to vomit are also due to this condition. This painful sensation, however, is not in all cases increased when pressure is made by the hand upon the epigastrium. Still, the nausea, and the constant, often unsuccessful attempts to vomit, are very annoying, causing much suffering to the patient. If he succeed in his efforts to throw up anything from the stomach, which at this time is generally empty, the vomited matters are found to consist of a thin mucoid, sometimes ropy fluid, of a white and frothy appearance, frequently mixed with bile or small portions of undigested food; in some cases it is even mixed with pure bile, presenting, then, a green color. A microscopic examination reveals that this fluid is principally loaded with large flat epithelial cells, belonging to the scaly or squamous variety of epithelium, not derived from the epithelium of the stomach, but from that of the mouth, pharynx and œsophagus. Many of them are floating singly, but the greater part, adhering to each other in their former positions, still form small shreds of epithelium of different sizes. Others, again, are in a state of disintegration; their outlines have become faint, showing that their protoplasm is about to dissolve, resulting in the setting free of their contained nuclei and granules. It is from this source that the free nuclei and numerous granules floating in the liquid are derived. In some specimens of this frothy mucoid matter I have met with zoglœa

of micrococci, or with other bacteria; in other instances, however, these organisms were absent. In correspondence with the presence of the large epithelial cells, derived from a scaly epithelium, it will be found that by examining the fauces and pharynx, these parts, in some instances also the tonsils, are considerably congested, and I entertain no doubt that frequently the congestion extends farther down into the œsophagus. During the epidemic of 1867, I met with one particular case in which any liquid which the patient attempted to swallow never entered the stomach, but was invariably rejected before it passed mid-way of the œsophageal tube, the phenomenon depending very probably on a temporary stricture, produced by the swelling of the mucous membrane of the œsophagus; the difficulty was relieved by the application of a warm poultice. From the above examinations it may be presumed that the epithelial elements are surely derived from the congested parts, while the mucoid liquid may come from the stomach.

There are a number of cases, in which these gastric phenomena accompany the fever from its first appearance, but, generally, they manifest themselves on the second or third day. They should always be closely watched by the physician, and never be overlooked in the prognosis of the case; for the relation they bear to the final issue, in indicating the condition of the liver, as I shall show hereafter, is as important as that of the temperature, indicating the intensity of the fever.

The congestion of the conjunctiva, to which we ascribed the muddy appearance of the eyes on the first day, has now become more or less developed, giving to these organs a moist appearance. The fur of the tongue has increased in thickness, and has assumed a yellow or brownish tint. The patient is very thirsty, and constantly demands cold water to drink. This excessive thirst is usually referred to the disturbed circulation of the mucous membrane of the stomach, though I think that the fauces, pharynx and œsophagus may contribute their full share. Frequently, the water, after having remained a short time in the stomach, is thrown up again. The urine, which at first was natural in appearance, assumes now a more reddish tint, and, in some cases, it may be found to contain some albumen, even at

this early period. The bowels are usually costive. Quite frequently the patient complains of pain in the lower part of the abdomen, directly over the region of the urinary bladder, indicating that this organ also participates in the congestion generally observed in the mucous membranes, or in other secreting organs, a condition which I have found verified in a few instances by post-mortem examination. Fortunately, the congestion in the bladder is usually slight, the pain being soon relieved by the application of warm poultices, and often followed by a passage of urine. In many cases, the perspiratory glands of the skin have now resumed their function—in some instances to such a degree as to become excessive. Sometimes the perspiration is so profuse as not only to completely wet the patient's clothes, but also the bedding upon which he rests. It is a singular fact, which attracted my notice during the epidemic of 1867, that however profuse the perspiration might be, there was no abatement in the fever observed, the temperature of the skin remained the same, or even rose, while the pulse continued to beat with the same force as before. At this time, also—sometimes earlier, but generally when perspiration commences—a peculiar odor is perceived to emanate from the patient, and, moreover, a peculiar burning, stinging sensation is imparted to the points of the fingers when the moist and heated skin is touched, as is done in feeling the pulse. I have frequently felt this stinging sensation, after I had washed my hands and left the patient. The peculiar odor emanating from the skin, and which, according to some authors, is also perceived in the breath, has been noticed by a number of physicians, and by some even been regarded as pathognomonic of yellow fever, while others have not been able to detect it. The failure of the latter, however, may be due to their sense of smell not being sufficiently acute, a circumstance rendered more than probable in consideration of the greater or lesser difference surely existing with regard to the other special senses among different individuals. I can entertain no doubt of the existence of this odor, for I have perceived it distinctly, and without a previous knowledge of it, during the epidemic of 1867 and afterward; and it is also observed by the friends and nurses of the patient. But that a particular diagnostic value should be attached to it, I

would not venture to assert in face of the fact that similar odors are perceived in other acute infectious diseases, as small-pox, scarlet fever, measles, etc. In small-pox, the odor is very distinct, and may, as I know from experience, even be perceived before the eruption makes its appearance; to myself, however, a difference appears to exist between the odors of the two diseases.

The most important clinical phenomena, observed in the whole course of this disease, are certainly those arising from the noxious influence of the specific poison upon the nervous system. In fact, the nervous symptoms are, perhaps, the first by which the disease announces its approach, and are therefore prominent among the prodromes, manifesting themselves in the form of the slight headache and the general depression already referred to. When the real disease breaks out, these symptoms become more developed, and take a part in the chill or rigor; finally, however, after the commencement of the fever, they show themselves again in the restless condition of the patient. The severe pains in the head, spine, joints and muscles, and even the occasional spasms in the latter, especially indicate a strong afflux of blood to the cerebro-spinal axis, terminating, in most cases, in the establishment of a true hyperæmia, not only of the brain, but also of a portion of the spinal marrow; and, furthermore, as I shall show hereafter, of the thoracic and abdominal sympathetic ganglia. The steady progress of the hyperæmia is easily recognized by the pain in the head and spine increasing in severity, and giving rise to sighs and groans on the part of the patient. In correspondence with this condition, therefore, a slight delirium may in a number of cases be observed as early as on the first day; if not, it surely makes its appearance on the second, though it may be of a very mild character. In mild cases, it may only consist in irrational language or mutterings, uttered by the patient as he restlessly turns from side to side in a state of sleepy wakefulness; a state from which he may, however, be easily aroused when spoken to, and even return a rational answer. But, in many cases, the delirium becomes more severe, and frequently attains such a degree as to render the patient violent, necessitating the use of force to restrain him to his bed, and to protect him from injuries which he might inflict upon himself. In fatal cases, delirium is

rarely absent during the course of the disease. I am inclined to think that, with a very few exceptions, the fatality of the case always depends upon the hyperæmia of the brain.

Under these circumstances the second day and night pass away, and the third day arrives, when, perhaps in most cases, the febrile storm commences to subside. At the same time, the accompanying symptoms have also considerably abated, and the patient, greatly relieved from his pain and anxiety, feels comparatively comfortable. In many cases, however, the fever does not subside until the fourth or fifth day. Then, the above described symptoms continue with greater or lesser intensity, with the addition of others, such as temporary retention of urine, costiveness, etc. The urine, also, almost invariably now contains albumen. Frequently, the febrile symptoms commence to abate soon after a free evacuation of the bowels or bladder. With the abatement of the febrile process, the temperature also begins to fall, and the pulse, which, in most cases, commenced to fall as early as on the second day, continues its descent in the same proportion. Some slight cephalalgia, or some tenderness over the epigastric region may still exist. In favorable cases, convalescence now commences and may continue without any serious interruption, until the patient has been restored to his former health.

But, unfortunately, the disease does not run in all cases the favorable course above described. On the contrary, only too often, after the subsidence of the febrile storm, graver symptoms, more or less typhoid in character, appear. In such cases, the patient, as in those above described, though prostrated from the fever, feels, also, comparatively easy and relieved from his sufferings at the end of the febrile stage; very often the relief is so great as to induce him to think the disease has left him entirely, and that in a few days he will be able to resume his daily occupation. This condition, representing the so-called second stage, is very delusive, and may last from two to three, or twenty-four hours, sometimes even longer, when the symptoms return in another form, and the patient approaches the third stage of the disease. The fever then lights up; the temperature which had commenced to fall, may rise again; the pulse also becomes

accelerated, but instead of being strong and full, as in the commencement of the disease, it is now small and thread-like. The irritability of the stomach has increased, and is again accompanied by the vomiting of a mucoid fluid mixed with particles of food previously taken, sometimes also with flakes of black hæmorrhagic matter, or even with pure blood. The act of vomiting, however, is not performed with the same violence as before; the matters are easily thrown up. The stomach rejects anything in the shape of food or drink. At this time, also—though frequently earlier—the conjunctiva commences to present a yellowish tint, which, as the disease advances, increases in intensity. The same tint is observed in the scanty urine, which now almost invariably contains albumen. A microscopical examination of this fluid frequently shows small granular masses, and according to some authors, albuminous casts besides. The skin, especially that of the face, neck and shoulders, also assumes the yellowish tint, which, as the disease progresses, gradually extends downward over the whole body. In many instances, hæmorrhages occur from the nose and gums, and even from the ears and the conjunctiva. The tongue is generally dry, and the yellowish fur covering it during the first stage of the disease, has now assumed a dirty brownish tint; the edges, if clean, are, together with the gums, of a purplish color. The nervous symptoms are rendered more prominent; the patient becomes again more restless, and the delirium returns; but as the patient's strength is now wasted, the latter has lost part of its violence, though, sometimes, it retains its character furious up to death. Frequently, muscular spasms of the limbs and subsultus tendinum occur. As the vomiting continues, the flakes of black hæmorrhagic matter gradually increase in amount, until at last a large quantity of them, mixed with a thin mucoid fluid, and known as "black vomit," is ejected at once. Often, with the ejection of this fluid, the violence of the symptoms is reduced, and the patient, though comparatively prostrated, feels relieved from the sensation of pressure, or tightness over the epigastric region.

Before continuing our sketch of the clinical symptoms, it may be proper to first describe the microscopical character of the "black vomits." When a fresh specimen of black vomit, ejected

from the stomach of a severe case of yellow fever, is, for a short time left standing in a bottle, it separates into two parts, the one of which represents a thin mucoid fluid, while the other, consisting of its solid parts and resembling coffee-grounds, settles to the bottom of the vessel. The mucoid fluid represents most probably the water with the liquid food, previously introduced into the stomach of the patient, mixed with the mucous secretion of that organ. The solid matters of the vomit, bearing a more important relation to the pathology of the disease than the fluid, consist, besides the disintegrated matters of food, such as fat, muscular fibers, etc., mainly of the constituents of blood and epithelium. A part of these constituents of the blood is represented by a considerable number of blood corpuscles, which, however, are now deprived of their coloring material, the hæmoglobin, appearing, therefore, perfectly colorless. They are characterized by a delicate though well defined double contour, and, in some cases, have preserved their normal diameter, while in others they have more or less decreased in size. In all the numerous specimens of black vomit which I have examined, the blood corpuscles were always found colorless, without regard to their diameter. This phenomenon is easily explained in considering the facility with which these bodies part with their coloring material, when surrounded by a fluid of a lower specific gravity than that of the liquor sanguinis. The water with which the patient allays his thirst, and of which a larger or smaller quantity is almost always present in the stomach, is alone sufficient to deprive the blood corpuscles of their hæmoglobin; though it is very probable, as will be seen hereafter, that these corpuscles part with a portion of their coloring matter while still contained, in a state of stasis, in the interior of the minute vessels, and before a rupture of the walls of the latter may have occurred. The other part of the constituents of the blood, found in the vomit, consists of the free hæmoglobin, or hæmatin, presenting itself in the form of yellow amorphous patches. Generally, these patches are found in company with smaller or larger groups of blood corpuscles, or even enclosing them, from which circumstances it may be presumed, that the escape of the coloring material from the corpuscles occurred already in the interior of the vessel, and during a state

of stasis. In some specimens, the yellow patches are observed to contain minute floccules, or masses of organic granules, probably derived from the mucous membrane of the stomach. Besides these elements, a number of colorless blood corpuscles, and free epithelial cells, or their remains, are also met with.

In order to prove that these yellow patches in reality represent the coloring matter of the blood corpuscles, instead of bile, as has been stated by some observers, I filtered a quantity of fresh black vomit, and allowed the solid parts remaining behind upon the filtering paper to dry, for the purpose of applying the well known test of *Teichmann*. Accordingly, I placed a small portion of the dried material—about the size of a head of a pin—upon a glass slip, and, after rubbing it up with a trace of table salt into a fine powder, put a covering glass upon it. A drop of glacial acetic acid was then allowed to run under the latter, and the whole preparation gently warmed over the flame of a spirit lamp, until small bubbles of gas were observed to be formed. A microscopical examination, made after the preparation had cooled, showed a number of minute crystals of the muriate of hæmatin, the so-called *hæmin* crystals of Teichmann, universally regarded as the surest proof of the presence of hæmatin. In some specimens of black vomit, however, I have found hæmatin crystals already formed.

Almost in all specimens of black vomit, certain fungous growths are met with. The one most frequently found is the yeast plant, or *Cryptococcus cerevisiæ*. If the specimen is left standing, other species of fungi will be developed. Very often, also, colonies, or so-called *zoglœa of micrococcus* are observed in fresh specimens; free oscillating sphero-bacteria, however, are rarely seen, unless the fluid has been standing for some hours, or longer. Some importance has been attached to the presence of these organisms in black vomit, and attempts have been made to establish a relationship between them and the cause of yellow fever. In the beginning of the epidemic of 1867, the germ theory, which, not long before, had commenced to attract the attention of medical men, had also taken root in my mind, inducing me not only to search for the germs in the very numerous specimens of black vomit which I then examined, but, moreover,

upon the various mucous membranes of the body in the numerous autopsies which I made. Failing, however, in my attempts to discover anything in support of this theory, I did not hesitate to discard it; for, as regards the fungi met with in the black vomit, it is obvious that the germs, from which they are derived, reach the stomach with the food and drink, and with the saliva of the patient, where they undoubtedly find the necessary conditions for their development.

In continuation of our sketch of the symptoms observed in the third stage of the disease, we may state that severe and dangerous as they appear to be, and really are, they do not necessarily determine the death of the patient. On the contrary, even at this period, the disease may still take a favorable turn. In such a case, the fever, which may have lasted about twelve hours, —rarely more—gradually subsides, and with it all other symptoms assume a milder character. The skin becomes moist, the pulse falls again, though remaining very feeble and compressible. The gastric symptoms have greatly diminished, the vomiting has ceased, and only some occasional eructations may be observed. The temperature, though still above 100° F., has fallen considerably, the defervescence continuing until convalescence is established. The delirium also passes, leaving behind a moderate cephalalgia. The most prominent symptom now left is the great nervous prostration. The nervous energy of the patient has been wasted, and all that remains scarcely suffices for the ordinary supply of the various organs of the body. Nevertheless, with all this damage, the patient may rally, and with the proper nursing, and careful treatment, convalescence may be established, though, in most of these cases, it is tardy, and often accompanied by other complications, such as diarrhœa, abscesses, periostitis of the tibia, suppurative parotitis, etc. I have seen a number of cases recover after black vomit had occurred, particularly children.

If, on the other hand, no amelioration of the disease occurs in the beginning of the third stage, the symptoms above described assume a character still more grave. The temperature rises still higher, while the pulse often sinks, sometimes to rise again before death. Not only more black vomit is thrown up from the

stomach from time to time, but, in some cases, also, the same black matters are passed from the bowels. The urine becomes very scanty, sometimes suppressed for many hours—from twelve to twenty-four, or even forty-eight hours; and if voided, it is in an abnormally small quantity, and muddy in appearance. In exceptional cases, the suppression of urine lasts until death. The hæmorrhages from the nose, gums, fauces and tongue become more frequent, and others, from the kidneys and bladder, may take place, the blood escaping from the urethra. The tongue is hard and dry, covered with a brown or blackish fur, sometimes scabby; the gums are swollen, and of a purplish color, frequently covered with sordes. In many cases hiccough appears; the patient now approaches collapse.

In a number of cases, especially those terminating fatally in the early part of the third stage, the delirium remains active until death approaches. Then, the patient is very restless, constantly attempting to rise, and if succeeding, soon falls back upon the pillow, when life may be suddenly extinguished; while, in other instances, the delirium continues in a low and muttering form until death.

In cases where the third stage extends over several days, the symptoms, already mentioned, continue alternately with more or less violence until collapse sets in. The patient then breathes with difficulty, sending forth deep sighs and moans; often, his face is of a dusky color, though the whole skin has assumed an orange-yellow; his countenance is sunken, his tongue tremulous. He lies there, with dry, scabby lips, and frequently with a bloody mucoid liquid escaping from the corners of his mouth; indifferent to, or, more truly, unconscious of his condition, muttering incoherent sentences, until death relieves him from his sufferings.

The above sketch of the clinical symptoms, observed in the course of yellow fever, as it occurs in the average number of cases, I do not consider entirely complete; some additions will, therefore, be demanded to fill up the vacant spaces, though not to such an extent as to embrace all the various exceptional forms in which the disease may appear, and which mainly depend upon the age, sex, temperament, peculiar predisposition and other previously existing conditions of the patient.

Thus, as regards the temperature, it remains to be mentioned that certain regular fluctuations are observed, consisting in slight evening exacerbations and morning depressions; but, these may correspond with the diurnal fluctuations of temperature observed in health, and they cannot be looked upon as regular remissions; especially as they are equally observed in other "continued" fevers. Although during the epidemic of 1867, and at other occasions afterward, I made use of the thermometer for the purpose of estimating the intensity of the fever, it was done without regularity and system, and no notes were taken from which accurate deductions might have been made. To the extent of my knowledge, it was by *Dr. J. C. Faget*, of this city, that the first systematic observations were made regarding the rise and fall of the temperature of the body, as it occurs during the course of yellow fever; and, judging from the results of his observations, together with those of other observers, the elevation and depression of heat, and the rise and fall of the pulse during the febrile process, appears to take place after a certain type, pathognomonic to this disease. In a treatise, entitled "*The Type and Specificity of Yellow Fever, etc.,*" published in 1875, Dr. Faget presents the rise and fall of the temperature and pulse—marked by dots and lines, upon systematically arranged charts—of thirty cases of yellow fever, collected and prepared by himself, Drs. *Tuatre* and *Layton;* and, furthermore, the charts of seventy-three cases, prepared from the tables of *Dr. Dudley S. Saunders*, published in his article, entitled "Observations on the Yellow Fever of 1873. Epidemic at Memphis, Tenn."* The deductions Dr. Faget made from his observations were: "That the course of the temperature in yellow fever, during the epidemic of 1870 in New Orleans, was characterized by a *single paroxysm*, the appearances of which, from one to three days in duration, was followed, without a stationary stage, by a defervescence of from four to seven days." Regarding the pulse, he states: "The maximum average being 120 pulsations on the first day; on the second day the pulse beats ten or twelve times less; in another twenty-four hours there are a dozen pulsations fewer;

* New Orleans *Medical and Surgical Journal*, May, 1873.

the *fall continues* on the following days, but with a *progressively decreasing rapidity;* in general, on the fourth day, the pulse oscillates toward eighty, and, with this figure, it has still hardly reached half of its return course, which will be completed only toward the seventh or eighth day; the descent will then go on still further, and toward the tenth day an astonishing *minimum* will be occasionally obtained; in some patients in convalescence, the pulse does not exceed forty in a minute." The average figures of the Memphis charts correspond in the main with those of the charts of Dr. Faget, and his statements, regarding the temperature and pulse in yellow fever, appear to be further corroborated when compared with the tables published by *Dr. Jos. Jones*, and prepared from his own records of ninety-three cases, and from the dates, obtained at the Charity Hospital by some of the resident students, of ninety-five cases.* Slight deviations depending on various causes, of course, may be observed to occur in different cases; yet, on the whole, the rule, laid down by Dr. Faget, seems to be true, and, if furthermore confirmed by numerous additional observations, will greatly assist in the diagnosis of the disease, even as early as the second day, when the pulse commences to fall, while the temperature rises.

Much importance has always been attached to the interruption or failure of the urinary passages during the course of yellow fever; that is, at a time when, under ordinary circumstances, they should appear. And it is not only the physician who is anxious to see the kidneys and bladder continue to perform regularly their functions, but the nurses and friends of the patient, also, knowing from hearsay the danger associated with a suppression of urine, watch the performance of the urinary function with interest and anxiety, and seldom fail to report on this subject to the physician, if he should forget to make his accustomed inquiries. Suppression of urine, it is true, is one of the most dangerous symptoms met with in this disease, and, if not relieved, will be followed by the death of the patient. But, I am inclined to think, that in many cases in which the non-appearance of the urine is ascribed to a suppression of the func-

* *Jones*—"Yellow Fever Epidemic of 1878 in New Orleans." New Orleans *Medical and Surgical Journal*, June, 1879.

tion of the kidneys, this secretion is only retained, small as it may be in quantity, in the bladder. To this view I have been led by my macroscopical and microscopical examinations of the urinary bladder and kidneys. Whenever a suppression of urine really occurs, it is always during the latter part of the third stage of the disease, and in protracted cases, after sufficient time has elapsed for the destructive pathological changes in the parenchyma of the kidneys to take place. A temporary retention of urine often occurs during the first stage of the disease, when it may depend on an irritation of the mucous membrane near the outlet of the bladder, exciting the muscular fibers of the sphincter to contraction. The relief obtained by the application of warm poultices over the region of the bladder seems to corroborate this view. If the retention occurs after the febrile stage, when the nervous energy of the patient is greatly depressed, the phenomenon may be owing to a debility, or even temporary paresis of the muscular element of the bladder. itself. That such a condition may exist becomes very probable in considering the spinal hyperæmia in the lumbar region, the existence of which is not only indicated by the excessive pain in this region during life, but, moreover, confirmed by the hyperæmia, observed after death in the pia mater of the spinal marrow of the same region, extending even to the marrow itself. The details of this subject, however, I shall discuss more fully in connection with the pathology of the disease.

In regard to the "black vomit," it should be mentioned, that not infrequently fatal cases of yellow fever are met with, in which this clinical phenomenon does not manifest itself, though all other characteristic symptoms of the third stage, indicating that a hæmorrhage from the mucous membrane of the stomach must probably have taken place, may be present. An autopsy, made in such cases, will invariably reveal the presence of a larger or smaller quantity of the same black matters in the stomach; sometimes also in the intestines. The retention of these matters in the stomach during life is obviously owing to an excessive debility, not only of the muscular coat of that organ, but of all other muscles concerned in the act of vomiting, corresponding to the general nervous exhaustion of the patient.

Although our description of the symptoms accompanying yellow fever is applicable to the great majority of cases, which during an epidemic come under the observation of the physician, there are nevertheless a number of cases met with, in which the symptoms do not present themselves in the general order as above described. Such deviations from the general type, however, will always be found to depend on peculiar conditions, predispositions, or even idiosyncracies of the patient, modifying the ordinary course of the disease. To regard these various modifications as separate forms of the disease, as has been done by a number of authors, would, indeed, render the whole subject almost too complicated for the practicing physician; and it must, therefore, be left to his fundamental knowledge and sound judgment to distinguish between these forms, and, accordingly, shape his treatment. A mere distinction between a sthenic and an asthenic, or adynamic form, would suffice for all practical purposes.

A peculiar form of yellow fever, termed by La Roche the "walking grade," has been mentioned by authors, and is frequently spoken of by physicians, though I have never met with it myself. In this form, using La Roche's description, "the patient, though sometimes in bed, is found more frequently sauntering about his room; and, indeed, he at times walks about the street for recreation or business; and though, in some instances, he states that he is weak, in others he exhibits at intervals, or throughout, marks of considerable muscular strength. He complains of nothing, denies his being ill, amuses himself in reading or otherwise, and, to a casual observer, appears to be slightly, if at all, indisposed. To the physician, however, matters appear in a different light; for he may gradually observe that the patient exhibits an unusual expression of countenance—dull and listless. The eye is watery; the complexion is almost mahogany color, while the pulse is found exceedingly weak, and even totally absent. Black vomit overtakes him, even while occupied in the way mentioned, or very soon after, and death speedily ensues."

In considering the symptoms, mentioned in the foregoing description, they are easily recognized as belonging to the second or third stage of the disease; and by a closer inquiry into the

circumstances of such cases, it would most probably be found, that the patient, though really feeling ill, by some peculiar notion or caprice of his own denies this fact, while by the strength of his will he manages to walk about, and attend to his daily occupation. We may further presume, that a febrile stage has previously existed, though in a very mild form, enabling the patient to deceive himself and his friends; and, moreover, that the poison of the disease, while affecting the brain very slightly, impressed its noxious influence more upon the sympathetic ganglia, affecting the heart, liver and stomach in such a degree as speedily to interfere with the functions of life.

As a counterpart of these "walking cases," those may be mentioned in which the patient, by an extreme fear of the disease, exhausts his nervous energy, and reduces his system to a condition most favorable to the reception of the noxious poison. A remarkable case of this kind I met with in my own practice during the epidemic of 1870. It was a young man, a German, of about twenty-three years of age, who consulted me at my office, believing himself attacked by the yellow fever. By examination, I found him apparently in good health, with no symptom of any fever about him capable of detection by the touch, as the thermometer was not used. Notwithstanding, I failed in my endeavors to convince him of this fact; and my advice, to put his mind at rest by dismissing his gloomy thoughts, made no impression upon him. He left my office, and before night sent for me to visit him at his room. I found him in bed, and in the same apparently healthy condition. No symptom of disease could be discovered, but he was still deaf to the encouragement he received from his friends and myself, calculated to dispel his fears and arouse his spirit. The next day, during which he took but little nourishment, passed in the same manner; but, on the third day, fever appeared, which, however, never became excessive. On the contrary, refusing all nourishment, and evincing a considerable apathy for everything around him, he gradually passed into a lethargic condition from which no moral or physical stimulants could arouse him. On the fourth day, tenderness by pressure upon the stomach was detected, followed by black vomit and

symptoms of collapse in the evening; he died during the night in a state of coma.

Although in this case no external symptoms of the disease could be detected during the first two days, we are nevertheless justified in presuming that the poison primarily affected the mind of the patient, impressing him with the idea that something was wrong with him, and then slowly exerted its noxious influence upon the abdominal organs, and probably also upon the heart.

Another form of yellow fever, mentioned by La Roche, is the "apoplectic grade." In cases of this kind, "the patient," as this author states, "is struck down suddenly, as if by lightning, with stupor or coma, and death, preceded by convulsions, soon follows. In other instances, the progress is less sudden. Without even the slightest premonitory symptoms, the patient is in an instant seized with vertigo and confusion of mind. He complains of dull pain and fullness of the head, together with spasmodic pain and considerable debility in the legs; coldness, debility, and a feeling of uneasiness in the spinal region. The pulse varies in different cases in point of fullness and frequency, but is always weak, and finally becomes faltering. The skin is cold, sometimes dry and flabby, but generally unctuous or bedewed with cold perspiration; the stomach is sometimes irritable. In the meantime, the patient lies as if stunned, with dilated pupils, and an expression of gloom on his countenance. From this unpromising state an effort of reaction occasionally takes place, but this scarcely ever leads to a successful result. More generally, the patient becomes perfectly comatose; the eyes assume a glassy appearance, the pulse fades away, involuntary discharges and profuse hæmorrhage supervene, and death soon ensues."

In considering the symptoms of these so-called "apoplectic" cases, I cannot but think, that, perhaps in all of them, a diseased condition of the anatomical elements of the brain, especially of its minute blood-vessels, has existed previously to the attack of yellow fever. This view is corroborated by my discovery of fatty degeneration of the nuclei of these vessels in a number of patients who died from yellow fever. In face of the fact, however, that a rupture in the walls of the minute veins of the mucous membrane of the stomach really does take place in the course of this

disease, I would not venture to deny such an occurrence in the brain, giving rise to the capillary form of apoplexy. But as, to the extent of my knowledge, there is no record of apoplectic foyers discovered in the brain after death from yellow fever, I presume that the symptoms attending these "apoplectic" cases may be rather attributed to a hyperæmia of that organ, of a very high degree, together with a direct action of the noxious poison upon the substance of the cortex cerebri itself.

In viewing in this light the various forms of yellow fever, described by a number of authors, it becomes obvious that they are equally produced by one and the same poison, affecting the organism under different conditions, but always accompanied by one or more of those symptoms characteristic of the disease. None of these forms bears a peculiar, distinctly defined character; for, if this were the case, it might also be presumed that each separate form of the disease depended on a separate form, or state of the poison. Whatever, therefore, the conditions of the organism may be when attacked by yellow fever, the latter will always show its own and distinct character, expressed by its pathognomonic symptoms during life, and also by the pathological condition of the various organs, observed after death.

When yellow fever supervenes upon another pre-existing disease, it may modify the accompanying symptoms of the latter, though it will always impress upon it its own peculiar marks. In another section of this treatise, I shall speak of a case bearing upon this subject.

[TO BE CONTINUED.]

Article II.

Remarks on Sources and Varieties of Vaccine Virus.

By Oscar C. DeWolf, M. D., Health Officer of Chicago.

In the January number of the *N. Y. Medical Abstract* is a brief review of a late discussion on vaccination by the Medical Society of Kings County.

Dr. J. H. H. Burge, in closing the discussion, makes the fol-

lowing inquiry: "What virus have we now in use in this country?" And he answers, "Probably six or seven kinds:

"1. We have, I hope, though I don't know where to obtain it, virus direct from the natural vaccination.

"2. We have humanized virus from the natural bovine vesicle.

"3. A virus resulting from humanized virus introduced again to the system of the cow, and brought back to man.

"4. Probably a virus resulting from inoculation of the cow with small-pox matter.

"5. It is not impossible that we have a virus from other vesicular diseases in the cow resembling vaccinia.

"6. We have the calf-to-calf virus, originally from the true natural kine-pox, and descending through a long line of induced cases of vaccinia."

If this statement is true it is a grave impeachment of vaccine cultivators in this country, and the subject is of so much importance that I trespass on the courtesy of this society to briefly present the result of such facts as I have been able to gather.

The cultivation of vaccine matter by continuous calf-to-calf inoculation from which animals, as an endless source of supply, virus could readily be obtained, was practically unknown to the profession before the year 1866. Long previous to this date, however, animal vaccination had been practiced in Italy, where Troja, of Naples, conceived the idea of taking the virus from the arm of a child and vaccinating the heifer, which was perpetuated through a series of animals. This was simply retro-vaccination, *i. e.*, implanting upon the animal the same vaccine disease from the child which Jenner had methodically transferred to this child from the animal.

To this date, about 1803, we have no knowledge of the so-called spontaneous appearance of cow-pox in any animal other than those observed by Jenner in England late in the previous century.

Negri, the neighbor and successor of Troja, followed in the steps of his master, vaccinating such people as would submit to the operation, until about the year 1820 he discovered a case of natural cow-pox in Calabria, and thereafter propagated entirely

from this source. For a subsequent period of 44 years animal vaccination was confined entirely to Italy.

In 1864, Dr. Palasciano, of Naples, addressed the Medical Congress, assembled at Lyons, on the subject of animal vaccination as practiced by his townsman Negri. So impressed was one of his listeners, Dr. Lanoix, that he visited Naples immediately to study animal vaccination under Negri. On his return to France he brought with him a calf nine months old vaccinated by his teacher. Stopping at the railroad station at Lyons only long enough to permit Dr. Diday to take sufficient matter from the heifer to vaccinate several children, he hastened with his charge to Paris. Here he attempted for nearly two years to interest the profession and the public in his work, with only a moderate success.

There was a great deal of doubt expressed in regard to this Neapolitan stock of vaccine virus. In spite of all the assertions to the contrary the general opinion declared that it was a case of retro-vaccination, and not true heifer-transmitted cow-pox.

And now appears the famous heifer from Beaugency, which has revolutionized public and professional opinion touching animal vaccination.

It is idle to speak of any specific infection as originating spontaneously, yet in referring to this heifer, historians treat her disease as appearing spontaneously, and we continue the fiction.

A woman (Dronin) living in the town of Beaugency, in the department of Loiret, fifteen miles from Orleans, visited her yard as usual, on the morning of March 28, 1866, to milk her cow. The heifer was thirty months old, white, of the Breton breed, and had dropped her calf four months previous. She was astonished to find her less gentle than usual, and upon examination discovered some remarkable vesicles on the skin of the udder at the base of the teats. A veterinary surgeon recognized at once the character of the eruption, and M. Depaul, the director of the government vaccine establishment in Paris, was notified. He at once visited Beaugency, bought a fine calf which he vaccinated from the white heifer, and departed for Paris with his prize.

Depaul's calf developed twenty-seven fine vesicles, and thus

was inaugurated the true and undoubted method of animal vaccination. Heifer-to-heifer vaccination was continued by Depaul, and his virus was rapidly distributed throughout France. In June, 1870, Dr. Henry A. Martin, of Roxbury, Mass., dispatched an agent to Paris to obtain virus from this source. Depaul supplied him with matter from the 258th, 259th and 260th of his continuous series from the heifer of Beaugency.

This agent reached Boston on the 23d of September, and on the same day Martin vaccinated three heifers, on the next day two, and two each day thereafter until ten were vaccinated and the supply exhausted. For six succeeding years Martin's stock was exclusively used in this country.

Dr. Frank P. Foster, of New York, in charge of the vaccine dispensary, commenced the propagation of virus from Martin's heifers in November, 1870.

Dr. E. L. Griffin, of Fond-du-Lac, Wis., established his stables in November, 1872, using the same stock. The two or three other establishments in New England, aside from Martin's, obtained their virus from him. Within the last three years other stocks have been introduced.

Dr. Griffin, of Wisconsin, lost by accident his original stock in 1880. He at once procured a new virus from the service of the government director of vaccine at Brussels. The pedigree of this stock I cannot trace further than this, that Dr. Warlomont, the director of the Belgian establishment, introduced into his stables in 1868 the "Esneaux lymph," so called from a neighborhood in which a case of spontaneous heifer disease was found. Dr. Warlomont is the most prominent propagator of vaccine virus in Europe, and the prophylactic power of this Belgian stock is probably second to none. Dr. Pottet, of Cleveland, is propagating from Griffin's recent stock.

The Jenner vaccine farm at Chambersburg, Pa., claims to be propagating the Beaugency stock, imported from France. This claim is doubted by reliable gentlemen with whom I have corresponded in this country and Europe. The Franco-German war so interfered with all industries, that among other results the service of heifer vaccine was totally abandoned in Paris during the siege, and the Beaugency stock was absolutely lost in

France. This Pennsylvania firm being of recent date, I presume to be using the Belgian stock.

Dr. W. E. Griffiths, of Brooklyn, N. Y., commenced in 1878 the propagation of virus from a spontaneous heifer disease discovered in Central New York. I do not obtain a satisfactory pedigree of this stock, but it seems to be reliable, for it has established itself as a vigorous prophylactic.

One propagator on the Pacific Coast, one in Wisconsin, and three in the Middle States, other than those previously mentioned, are cultivating virus from Martin's or Griffin's stock. It remains only to refer to attempts to variolate the cow, and the probability of any such virus being found in this country. There is no doubt that Jenner regarded small-pox in man, and cow-pox in the cow, as identical diseases, or manifestations of a single cause. There is no evidence, however, that he ever attempted the transferal of variolous matter from a man to a cow. Jenner's hypothesis was denied by many of his contemporaries and successors, but Dr. Martin in his very able report on animal vaccination to the American Medical Association, in 1877, says: "Accumulated experience, some of which is quite recent, seems very decidedly to confirm this wonderful guess." Many experimentors have attempted this difficult feat and have generally failed.

Ceely and Badcock, of England, in 1839 and 1840, inoculated 600 cows, and claim to have succeeded in only 37 cases. In 1862, while stationed at Hilton Head, S. C., I had the opportunity of attempting this service. I covered the head of a six months old calf with a shirt saturated with variolous matter, and kept her breathing through it for 24 hours. I inoculated her in many places with matter in its most active stage, but failed to infect her. In Mr. Ceely's successful cases he continued the inoculation from heifer to heifer, and finally produced a virus with which he safely and protectively vaccinates the human animal.

Other experimentors have for the moment claimed success until painfully informed of their failure by the appearance of small-pox as the result of the use of their virus. Such an instance occurred in our own State last year.

Dr. Meyer, of Monee, a P. O. hamlet in Mattison, took matter from a heifer which he had succeeded in variolating, and introduced it into several families. The majority of his patients suffered a mild small-pox, but several developed the disease in a confluent form. The reporter adds, that the Doctor's Teutonic neighbors were looking for him, and anxious that he should decorate the bottom of a well, but he had left the bailiwick. I know of no other similar attempt in this country.

Dr. Martin says: "It is my conviction that in some mysterious manner nature may elaborate vaccinia from variola in the system of the milch cow, but that man can with no certainty repeat her process at will, nor does nature herself always accomplish it with success."

With the plentiful supply of pure vaccine matter now to be had in all civilized communities, it appears to me a criminal act to attempt this production of virus from human variola. Small-pox virus should never be touched but to destroy it. To attempt its cultivation, even though sometimes successful, resembles the proposition to cultivate tigers in a country for the purpose of destroying the wolves when these little animals become troublesome.

I conclude that we have four sources of vaccine supply now in popular use in this country:

1. The Beaugency stock introduced by Dr. Martin.
2. The Belgian stock introduced also by Dr. Martin, and by Dr. Griffin.
3. The culture of Dr. Griffiths, of Brooklyn, from a case of spontaneously appearing disease observed by him in the State of New York.
4. Humanized virus from all the above stocks.

ARTICLE III.

LORD BEACONSFIELD AND HIS PHYSICIANS. By DR. JAMES I. TUCKER, Chicago.

"Whereupon Dr. Quain wrote Dr. Kidd, asking him to state his method of treatment." (*Chicago Tribune*, April 17.)

Lord Beaconsfield, late Premier of England, at the age of seventy-seven was taken mortally ill. When such a man falls a victim to disease, his case naturally attracts the attention of the whole civilized world. Whose career was ever more eventful and extraordinary than that of Benjamin Disraeli? Scholar, author, orator, statesman, diplomat. Like his father, the author of that remarkable book, "Curiosities of Literature," his ambition was first in the direction of literature. We have all read his "Vivian Grey," and enjoyed its originality, vivacity and wit. We have perhaps read his "Young Duke," his "Contarini Fleming," interesting to us because its subject is psychological; the "Wondrous Tale of Alvoy," "The Rise of Iskandra," "Henrietta Temple," a love story; "Venetia," in which the characters of Byron and Shelly are so well portrayed; his "Sybil," "Ixion," "Tancred," and last of all, "Endymion," which, like some of the others, is extraordinarily popular because its principal characters are drawn from well-known persons now living. He was a powerful debater, a keen and polished satirist. He became Chancellor of the Exchequer, Member of the Privy Council, leader of the Ministerial party in the House of Commons. Is it strange that such a man, who, by the force of talent, industry and perseverance rose to such an eminence, should attract universal attention now that, while I write, his life is fast ebbing away?*

Therefore, when physicians are called to attend such a man in their professional capacity, their conduct is not only carefully scrutinized, but what they say and do has a deep and lasting influence upon the medical world. Lord Beaconsfield's family

* He has since died.

physician had been for years a certain Dr. Kidd. Is it probable that this physician would have obtained and retained the confidence of such a man as Disraeli unless he had possessed certain sterling qualities, both as a man and a medical adviser? But, realizing the grave responsibility of his position, Dr. Kidd sought counsellors. Sir William Jenner, physician to the Queen, refused to go. Why? Because Dr. Kidd was *reputed* to be a homœopathist. Shades of our fathers! What would old Edward Jenner, the illustrious progenitor of this hypercritical and hyperroyal aristocrat have said had he been living at that critical moment? Do we clearly recollect the trials of this great medical reformer? Pupil of John Hunter, he naturally acquired a passion for original investigation. He certainly met with very little sympathy and encouragement from his medical contemporaries, and he was even forbidden, by the medical societies to which he belonged, to indulge in his speculations, under penalty of expulsion! He was accused of "bestializing" his species, by the profession, and his method was pronounced "diabolical" from the pulpit. And yet, now, we all, including Sir William Jenner, physician to the Queen, look upon him as one of the greatest benefactors of mankind. We all vaccinate now. Next, Dr. Quain was called. For the life of him he could not see how his services would be useful, inasmuch as Dr. Kidd was a homœopathic practitioner, and his own method was diametrically opposite. But Dr. Quain sought the advice of Sir George Burrows, ex-President of the College of Physicians. How glad we ought to be that we have in the medical world something akin to a high priesthood or a supreme judiciary, to which we can appeal in time of trouble! So he went—Dr. Quain, of anatomical fame, went—but, wisely, not until he had received from Dr. Kidd an answer to a letter requesting him to state his method of treatment. Dr. Kidd's answer was satisfactory. He said he was not a homœopathist; that he treated his patients with pharmaceutical remedies in pharmacopœial doses, according to the principles of scientific medicine, though he did not feel precluded from using in his practice the *so-called** homœopathic remedies. "Although,"

* The italics are my own.

he writes, "I am a reported homœopath, I desire once for all to disclaim any such party designation. * * * In a very extensive practice, extending over thirty-four years, I have always adopted that course of treatment which my own study and experience have taught me to be most effectual to my patients. Herein I lay claim to having acted as any man does who is not bound by the *trammels of merely mechanical routine.** Like other practitioners, I use the drugs of the British pharmacopœia, but in many cases I have learned from experience that what are called homœopathic remedies may be usefully prescribed. Such remedies I freely use in suitable cases, and according to my own judgment. I do not prescribe infinitesimal doses, nor do I prescribe according to the caprice of my patient."

Is it surprising that Dr. Quain, in view of this explanation—an explanation which Sir William Jenner, descendant of the immortal and persecuted Edward, did not deign to try to obtain—is it surprising, I say, that he was "loud in his praise of Dr. Kidd?" "Moreover, Dr. Quain wrote to Dr. Kidd, asking him to state his method of treatment." The answer was prompt, explicit and manly, and yet Dr. Kidd is still under the ban of professional ostracism, and Dr. Quain has been censured for consulting with him! Is it not time that this narrow antagonism toward those who differ from us in slight degree should be eliminated from the conduct of men who claim to represent a liberal profession and to be actuated by motives of the broadest humanity?

I am glad to learn that one of our brethren, Dr. Fordyce Barker, publicly condemns this antagonism and unreasonable exclusiveness. Let it be understood, once for all, that I have no sympathy whatever with pure homœopathy, or any system which is not based upon the *tolle causam* of Hippocrates, and in its therapeutics is not broad enough (to use the words of Dr. Oliver Wendell Holmes), "to appropriate everything from every source that can be of the slightest use to anybody who is ailing in any way or is like to be ailing from any cause."

It follows, therefore, that any party designation, like allopath,

* The italics are my own.

homœopath, isopath, eclectic, hydropath, electric, Thompsonian, medico-physiological, or any other whatsoever, must, in the nature of things, come in violent collision with any enlightened code of ethics, expressed or unexpressed, which is founded upon the Common Sense of the liberal profession of Medicine. A member of this profession can be absolutely *nothing* more or less than PHYSICIAN.

MORTALITY IN CHICAGO.—Pop. 503,298. February, 1881, 836; Feb., 1879, 533; Feb., 1880, 738. Greatest mortality, Feb., 1881, was under 10 years of age and between 20 and 30. Tubercular diseases, 97; meningitis, and cerebro-spinal fever, 39; pneumonia, 56; croup and diphtheria, 85; small pox, 33; scarlet fever, 22; infantile convulsions, 63; heart disease, 22; bronchitis, 47; puerperal peritonitis, 22; old age, 26; by violence, 36. These were the most prominent causes; 250 is the total number of deaths referred to zymotic diseases.

SMALL POX continues to prevail throughout the country. Its chief centers are at Philadelphia, which reports between forty and fifty deaths per week; Chicago, where it is next in frequency, eight or nine deaths a week being reported; New York Brooklyn, Pittsburgh, Pennsylvania, and Brownsville, Texas.—*Medical Record.*

ANOTHER CASE OF NEPHRECTOMY in a child, with suppurating and cystic kidney, was performed recently at the Evelina Hospital, by Mr. Morrant Baker. The child was, at last accounts, doing well.—*Ibid.*

BILLROTH'S OPERATION FOR CANCER OF THE STOMACH.—The patient from whom Billroth removed a cancer of the pylorus, by excising part of the stomach, is reported to be nearly well. She takes food by the mouth without trouble.—*Ibid.*

Clinical Reports.

NOTES FROM HOSPITAL PRACTICE.

ARTICLE IV.

A CASE OF AORTIC ANEURISM, AND ONE OF AORTIC ENDARTERITIS, WITH AUTOPSIES.

By B. C. GUDDEN, M.D., House Physician, Cook County Hospital.

I. *Aortic Aneurism.* C. S., æt. thirty-eight, German; admitted to hospital December 25, 1880. Had acute rheumatism in 1875. Six weeks previous to admission he was taken with a sudden, sharp, lancinating pain in left axillary space, with slight cough. Pain increased in deep inspiration. From that time his appetite was poor, tongue furred, bowels constipated. Pain constant in the left side. Physical examination showed a loss of expansion and of respiratory movement with absence of vocal fremitus over the left lung, except in the infra-clavicular region. Flat percussion note. The right side of the thorax afforded low-pitched sounds with increased respiratory movements. Area of cardiac dullness increased, apex beat slightly moved to the right. Systolic murmur at the base, with a considerable bruit transmitted to the aorta. Liver displaced downward. Feet slightly œdematous. Treatment with ergot, iodide of potassium, counter-irritation, and anodynes.

January 7, 1881, one ounce of clear serous fluid was aspired from the left pleural cavity in the seventh intercostal space. January 14 no pulsation was felt in left radial, nor in left carotid artery. Patient was failing fast, had orthopnœa, annoying cough, and expectorated muco-purulent matter streaked with blood. Pain increased. January 21, patient had a slight chill.

Pulse 114, temperature 102.5. Quinine was administered. January 24, more bloody serum was aspired. Temperature subsided but raised to 103 January 30, when patient expectorated from four to six ounces of bright blood. Had another profuse hæmoptysis February 1, 4 a. m. Treatment, ergot and whisky, and inhalation of ammonia. February 2, pulsation ceased in the right radial artery. Patient died in the night.

Post-mortem forty-eight hours after death. Intercostal spaces of the left side bulging. A puncture gave a free exit to a large quantity of sero-sanguineous fluid. On removing the sternum, the left pleural cavity is found distended with sanious fluid. Left lung pressed upward. Right lung normal or slightly emphysematous. Pericardial fluid contained some fresh lymph and was slightly increased. Heart normal. There was about a gallon of fluid in left pleura. Large clots of blood and shreds of lymph settled at the bottom of the fluid. The pleura was ruptured near the third dorsal vertebra, near its reflection over the left lung. Removing the left lung, trachea, heart and aorta *en masse*, we found that the bodies of the second, third and fourth dorsal vertebræ had been absorbed. Mucous membrane of trachea ulcerated, and the cartilaginous rings absorbed. There was a communication between the left bronchi and the pleural cavity through the rupture above mentioned. Then the aorta was laid open from behind into what proved to be a large *aneurismal dilatation*, which had opened into the pleural cavity. It was partly filled with fibrinous laminæ at its periphery, and these occluded the mouths of the left carotid and subclavian artery. The left lung was completely consolidated. The pressure of the aneurism had caused the absorption of the bronchial walls, as well as that of the bodies of the vertebræ.

II. *Valvular Heart Disease and Aortic Endarteritis.* O. D., æt. forty-two, American, painter, admitted to the hospital February 15, 1881. Patient had typhoid fever ten years ago, and has had several attacks of rheumatism. Had angina pectoris four years ago. January last he had for the first time a dry and hacking cough, with expectoration of a whitish, frothy mucus, which soon became purulent. It has been occasionally streaked with blood lately. On admission he had anorexia, constipation,

a frequent hammering pulse, and complained of some lumbar pain. Tongue furred; cardiac area increased; apex beat in the mammary line. A blowing sound is heard at the base of the heart with both the systole and the diastole, and the systolic murmur is heard at the apex. In the right infra-scapular and infra-axillary regions, the vocal fremitus is diminished, and friction sounds are heard. Percussion note is flat. There was some œdema of feet, and the urine contained seven per cent. of albumen. Has hæmorrhoids. Treatment consisted in a nutritious diet, morphine and chloride of ammonium; to allay the cough, small doses of iodide of potassium. February 18, 1881, patient had dizziness and headache. The veins of the neck were engorged, and scarcely any pulsation could be detected in the left carotid and the left radial artery; dyspnœa and difficulty in swallowing; sharp and lancinating pain in the chest, extending to the left shoulder; slight friction sounds at top of left lung. March 3, free expectoration of blood; œdema of feet increases; patient is failing. He expectorated more blood the 15th, and died the 18th, apparently from exhaustion and anæmia. Morphine was given to relieve the pain, as often as necessary; temperature had been normal; auscultation over the base of the heart had detected no decided aneurismal bruit.

Necropsy forty-eight hours after death. On opening the thoracic cavity, both pleuræ contained one and a half pints of clear fluid. There were two ounces of clear serum in the pericardium. Heart increased in size; aortic valves thickened and shortened, the left being also perforated by an ulcerative endocarditis; fatty degeneration of the muscular substance of the heart; both lungs are œdematous; the bronchi contain some mucous matter, and their mucous membrane is injected and ecchymotic; endarteritis deformans in the arch of the aorta without dilatation; considerable narrowing of the mouths of left carotid and subclavian arteries, which are obstructed by calcareous deposits; spleen enlarged and sclerotic; liver is normal in size, but has a nutmeg appearance; sclerosis of the kidneys is well marked.

ARTICLE V.

COOK COUNTY HOSPITAL.

REMOVAL OF A LOOSE CARTILAGE FROM THE KNEE-JOINT, AND USE OF ABSORBABLE DRAINAGE TUBES. Service of PROF. CHRISTIAN FENGER.

These tubes had been prepared by shaping pieces of bone into cylinders, two or three inches long, and about one-fifth inch in diameter, boring them into tubes, and destroying the mineral constituent by soaking in hydrochloric acid. After immersion in a solution of carbolic acid for a few days, they were kept in a fifteen per cent. solution of carbolic acid in oil. They are flexible, resemble brown rubber tubes, and have the property of being absorbed, as catgut ligatures, so that they may be used with permanent dressings, as this case showed.

Patient, Thos. K., æt. twenty-six, born in this country, had a sore knee for a number of years. Four months ago he was confined to his bed four days on account of that joint. He has been able to work since, but he could not stand on his feet longer than a couple of hours at a time, and he had much difficulty in walking. He was admitted to the hospital February 4. Esmarch's bandage was rolled around the leg and tied above the knee with rubber tubing. Two sprays were used, being held by assistants, but this has no special advantage over the stationary atomizers. An incision one and a half inches long was made on a line with the external border of the patella, and the hypo-external articular artery was tied. After all hæmorrhage had stopped, the synovial cavity was opened into, and the loose cartilage taken out. The synovial sac was closed with catgut sutures, and an absorbable drainage tube, described above, was left in the external wound to allow a free discharge till union had taken place, and then be absorbed, thus doing away with further dressings. The wound was now packed with ruffled pieces of gauze wrung out of a solution of carbolic acid, which were four or five inches square, and formed a layer more than two inches thick to

absorb the discharges. A layer of salicylated cotton was placed over this, and bandages rolled over the whole. The limb was now placed in a well-padded splint, and was not disturbed for two weeks. There was no rise in the temperature, and there was no complication.

The loose cartilage is three-quarters inch long, two-thirds inch wide, and half inch thick, with round edges. It is half bony, or, as Prof. Fenger describes it, is "composed of a fibro-cartilaginous substance with calcareous matter in it resembling bone."

On removing the dressings, it was found that a part of the drainage tube had been absorbed, while its free extremity adhered to the gauze. The wound was healed. The patient is well, and has been discharged.

PERFORATION, WITHOUT FRACTURE, OF THE FEMUR, BY A THIRTY-TWO-CALIBER BALL.—OPERATION BY PROF. C. FENGER.—THE FEMORAL VEIN LIGATURED.

M. F., male, æt. twenty-two, born in this country, was shot in the left thigh, five inches above the knee, December 16, 1880. He was removed to the hospital December 25, but the bullet could not be found, even after the wound had been enlarged and a purulent discharge had set in. After a careful examination by Dr. W. P. Verity, House Surgeon, it was found that the shaft of the femur had been perforated without fracture, an exceptional case.

February 4, 1881, Dr. C. Fenger operated. After using Esmarch's bandage an incision two inches long was made at the seat of entrance, and a sound passed through the femur, without encountering the ball. Another incision, two and a half inches long was made on the inside of the thigh, beside the femoral artery, and the ball was found imbedded in a muscle. The femoral vein had been cut during the operation and was carefully tied at both ends with catgut ligatures. A rubber drainage tube was passed through the femur, with both extremities free, and Lister's dressings were applied. The pulse beat 160 times in a minute, immediately after tying the vein, but soon returned to 100. The treatment consisted of quinine and whisky in tonic

doses. The wound was dressed every third day, and the highest temperature, February 11, was 104; pulse 120. February 15, the drainage tube was removed; it was nearly fastened to the bone. Patient made a complete recovery in a few weeks.

ANOTHER CASE OF SHOT-WOUND.

J. D., æt. twenty-four, male, American, accidently shot himself through the left hand and thigh. Patient was anæsthetized, and the ball was probed for but could not be felt. He was admitted to the hospital March 16, the day following the accident, and on the next day his temperature was 103. The hand was dressed antiseptically and healed in the course of two weeks without any inflammation setting in. The wound in the thigh suppurated and an abscess formed in the thigh. March 23, the bullet was felt by the probe and extracted through a counter opening six inches below the point of entrance. A drainage tube was introduced, and patient is nearly well. Treatment consisted of quinine and whisky.

As these two cases show, although the bullet cannot always be felt in gunshot wounds, at first, it can be discovered after suppuration has taken place, but the antiseptic treatment is useful in moderating the latter, and insures a prompt recovery.

INCISED WOUND OF ABDOMEN.

J. L., æt. thirteen, Pole, had a shoemaker's knife in his pocket, and slipped, falling on his side, the blade of the knife entering his abdomen two inches above and one and a half inches to the right of the umbilicus. The omentum protruded. This was on March 16, and he was admitted to the hospital the next day. The wound was one inch long. The omentum being replaced, the wound was closed with a figure of 8 ligature, under the spray. March 20, the ligature was removed, the wound had healed without any constitutional or local disturbance.

A BOLD AND SUCCESSFUL OPERATION.

T. D., æt. twenty-three, American, was struck on the head by a piece of timber falling in an elevator-way, March 15. Admitted to the hospital the same day. Temperature 102.5, pulse 150. Patient was unconscious for a few hours, unable to speak for two days, the timber had struck him on the left parietal bone, near the longitudinal sinus, producing a large scalp wound. At first there was anæsthesia of the lower extremities, and pins were thrust into the soles of the feet without producing any sensation. Patient was also paralyzed, on the right side most, and had an ugly ecchymosis of left eye. There was no facial paralysis. Patient was delirious the first few nights. Although the external table of the skull was not fractured, the house surgeon, W. P. Verity, became convinced that the inner table must be broken, and he trephined, March 18. He removed two fragments of bone which compressed the dura-mater, and dressed the wound antiseptically. From that time the temperature and pulse became normal, and the patient is now well. There is always a greater tendency for the inner table of the skull to break, often extensively, after injuries by blows, but if the external plate is intact, the diagnosis is difficult; so much so, that surgeons, a few decades ago, did not think trephining justifiable in such cases.

WE HAVE finally made arrangements, at considerable expense, which will enable us to lay before the readers of THE CHICAGO MEDICAL JOURNAL AND EXAMINER, and in due season, a report of the transactions of the forthcoming International Medical Congress. We have no question but that this course will meet with the approval of the subscribers to this journal.

ANNUAL MORTALITY IN CHICAGO FOR THE PAST YEAR.—Ten thousand four hundred and fifty-two deaths within the city limits; 3,903 are referred to zymotic diseases; 53.5 per cent. were under 5 years of age.

Society Reports.

ARTICLE VI.

THE CHICAGO BIOLOGICAL SOCIETY.

Stated meeting April 6, 1881. Dr. W. S. HAINES, President, in the chair.

After the minutes of the last meeting had been read by the Secretary, Dr. Roswell Park, Dr. R. Tilley brought two peculiar cases before the members. The first was a young man who had cut off the ends of first and second phalanges of his left little finger, and amputating the joint, but a large part of the muscular tissues and skin had remained intact. Dr. Tilley removed a sufficient part of the bones injured, but did not amputate the finger. The result was very satisfactory. The finger is shortened one-half inch, and a false joint formed at the point of union, but so near the natural joint as to escape observation; all the motions are preserved, and the usefulness of that finger does not seem to have been in the least diminished. The other case was a man over fifty years old, who has a perforation of the septum nasi three-eighths of an inch in diameter; supposed to be congenital. The same person has a detachment of the retina, for which there was found no cure, but Dr. Tilley having read of some cures lately accomplished by hypodermic injections of pilocarpine, has resolved to give that remedy a trial. The present difficulty has existed for a year, and the sight of the patient is very much impaired as to the left eye, which is the one affected.

MASKED MEASLES (?) AND GERMAN MEASLES.

Dr. H. M. Starkey reported the case of a child who, some time previous, had had an attack of false croup, from which he

had entirely recovered. The child now became feverish and had a coryza, and the Doctor was called. He made a diagnosis of measles, and the case seemed a well-marked one, but no eruption was present at any time during the disease. Eight days later another physician was called to treat another child of the same family who had just been taken sick with the same symptoms as the first. This physician also diagnosed masked measles. A third child came down with the disease, and Dr. Starkey attended it. It was precisely similar to the others, bronchitis and coryza were present, the temperature increased during the first four days reaching 103° and 104°, and disappeared in a couple of days. The children had been exposed to measles a few days before, and there were also cases of diphtheria across the street.

Dr. R. Park related his experience with 100 cases of measles which came under his observation during an epidemic several years ago. The incubation had generally been of four or five days. Seven cases which proved fatal succumbed to pneumonia or other lung complications. Some cases had exhibited but a slight eruption, but this could always be observed with a little care on the part of the physician or the nurse, and the fever had always lasted longer than in the cases reported by Dr. Starkey.

Dr. D. R. Brower had never seen masked measles, but he had observed cases of masked scarlatina, and thought that masked measles was very possible. He related his experience with an epidemic present on the West Side. It is an eruptive disease resembling scarlet fever and measles as to the rash, while it is very mild. His little girl, who has had the measles and scarlatina, had this peculiar disease, but another child of his escaped. He also had other cases in persons who had had scarlatina and the measles previously. It corresponds in every particular with German measles. The eruption develops all over the body at the same time. There is no trouble with the throat, and very little sickness. Drs. Jones and E. Ingals, whom he interviewed on the subject, had also met with cases of German measles. This is a contagious disease and should not be confounded with roseola, which is a non-contagious affection of the skin.

Dr. Starkey had a case of German measles among students in the college. The eruption resembled at first that of scarlatina.

There was a rise of a few degrees in the temperature, redness of the throat and fauces, and after a couple of days the rash resembled more that of measles. Patient had had this disease and also scarlatina a few years ago. No desquamation took place.

Some beautiful slides for the microscope, prepared by Dr. H. D. Schmidt, of New Orleans, were exhibited before the Society by Dr. S. V. Clevenger. There were 23 of them—some physiological, but most of them pathological representations of some of the cephalic and sympathetic ganglia; sections of the spinal cord, of the liver, the spleen, the kidney, the supra-renal capsule, and the mucous membrane of the stomach. Also lithographic illustrations of the pathological changes observed in yellow fever in the various organs. Dr. Clevenger then read the paper of the evening, which was a biographical sketch of Dr. Schmidt, and will be found in this number of the JOURNAL; after which he read various extracts from a treatise on Yellow Fever, by the same writer, and this will also appear in the JOURNAL. Before adjourning, the following motion was made and carried:

"Moved and seconded, that the Chicago Biological Society cordially indorse the work of Dr. Schmidt, and recommend its publication by subscription under its auspices; and that for all subscriptions handed to him, the treasurer be held responsible to Dr. Schmidt."

All the members present subscribed for the book.

ARTICLE VII.

CHICAGO MEDICAL SOCIETY—THIRTY-FIRST ANNUAL MEETING, HELD APRIL 4, 1881. Dr. R. G. Bogue, President, in the chair.

This was one of the largest meetings of the society since its foundation. There were about forty members present, and twenty-five visitors by invitation. The names of Drs. Chas. C. Sparey, graduate of Chicago Medical College, and W. W. Allport, graduate of Rush, and that of Dr. H. D. Valin, graduate of the University of Vermont Medical College, were

presented for membership and referred to the censors. The President welcomed the numerous visitors in a few words, and the Secretary, Dr. L. H. Montgomery, read the annual report of the society.

There were seventeen meetings held in the course of the year. None had taken place during the months of July, August or September, except one held on the occasion of the death of the late Treasurer, Dr. F. H. Davis. Number of members attending during the year, two hundred and seventy-eight; of visitors, seventy-four. The members of the society numbered one hundred and eighty-one at the beginning of the year. There were ten new members elected, and the society lost five members, leaving a total of one hundred and eighty-six. Of the five members lost, one had died, one left the city, another had never claimed membership, one retired of his own accord, and another refused to pay the annual fee. The Secretary had received $8.00 and expended $7.00 for postage and for a convenient record book for the society. The following papers had been read at the various meetings by the following members: Mastoid or Post Aural Abscess opening into the External Auditory Canal; Dr. F. C. Hotz. Causes of Epilepsy, with Photographs of Atrophy of one-half the Brain; Dr. S. R. Millard. Some Peculiarities of the Cerebral Circulation; Dr. J. S. Jewell. Lost Balance and Surface Treatment; Dr. G. Sprague. Diphtheria, with a History of Fifty Inoculated Cases; Dr. J. T. Everett. Atresia of the Genital Passages of Women; Dr. E. W. Jenks. Recent Progress in Brain Studies (illustrated with models); S. V. Clevenger. Woorara (Curare), its Analysis and Employment in Fifty-four Cases of Epilepsy; Dr. F. E. Waxham. Report of a Case of Meningo-Encephalitis; Dr. H. M. Bannister. A Review of the Progress of Medical Education in Chicago, with some Suggestions for its Advancement; Dr. E. Ingals. Genital Irritation and Hygiene of the Genital Organs of Young Children; Dr. R. Park. Expert Testimony, and the Microscopical Examination of Blood; Dr. R. H. Piper. Abscess in the Lower Part of the Tibia; Fibroid Tumor in Rectus Abdominis; Radical Cure of Varicocele; Dr. R. G. Bogue. Local Treatment of Chronic Gonorrhœa, by means of the Endoscope; Drs. C.

Fenger and A. Hinde. Some Sources of Error in Measuring with the Microscope; Dr. Lester Curtis. Report of a Gynæcological Case and Prolonged Gestation; Drs. Mary H. Thompson and John Bartlett. Mechanism of the Great Abscesses; Dr. E. Andrews. Health Aspect of Water Supplies; R. S. G. Paton, PH. D. The Gynæcological Chairs; W. W. Copp. Remarks on the Norton Attachment for Waste Pipes and Obstruction of Sewer Gas; Dr. R. Tilley.

None but original articles which had not been read in any other society before, were accepted. The following pamphlets were received: The Chicago Medical Review for 1880–1881; the Annual Transactions of the State Medical Society of Arkansas; the Annual Transactions of the State Medical Society of Tennessee; the Official Register of Physicians and Midwives of the State of Illinois; the Annual Report of the Illinois State Board of Health. The foundation of other scientific societies seemed to have diminished the interest placed in the society by its members; however, this last year had been more prosperous than any previous one.

Before retiring, the Secretary advocated a more thorough organization, a larger attendance of the members; that each member should be appointed to read an essay in his turn after a convenient time for preparation; that a more convenient place of meeting be secured, such as the Academy of Sciences, where there is an easy access to pathological specimens in the Museum; and an annual banquet be held in the manner of the alumni of colleges. He proposed that the initiation fee be increased to $2.00, and the annual fee to $3.00, to provide for the publication of the year's proceedings. He also believed that the usual announcement of meetings on postal cards might be discontinued, and notices sent to the daily papers.

The Treasurer next made his report. On his being elected to this office last summer, Dr. E. Fletcher Ingals found $17.00 in the treasury. He collected $211.00 in January alone. He paid out $54.93, and there is $173.67 left in the treasury. Both reports were unanimously accepted, $25.00 were presented to the Secretary, and $50.00 to the Grand Pacific Hotel, where the meetings take place.

The society proceeded to elect its officers for the coming year. Dr. E. Ingals was elected President; Dr. Mary H. Thompson, Vice President; Dr. L. H. Montgomery was re-elected Secretary; and Dr. E. Fletcher Ingals was re-elected Treasurer. The choice of a Committee of Censors was entrusted to the new President, who will name them at the next meeting.

A motion was also passed that the Secretary issue credentials to any member applying for them, to attend the annual meeting of the American Medical Association, at Richmond, Virginia, May, 3, 1881, as delegates.

The paper of the evening was read by Dr. Oscar C. DeWolf, Health Officer. It is a very valuable paper on the History and Nature of Vaccine Virus, and is published in this number of the JOURNAL. Dr. DeWolf also furnished the following interesting notes: The Health Department vaccinated 21,325 people last year. Of this number 8325 were primary; and among these ninety-three per cent. took, while in those who had been previously vaccinated, eighty-one per cent. was efficient. The daily attendance of school children in Chicago is 57,000. In 560 cases of vaccination among these, twenty of them exhibited some unusual symptoms. There were fifteen cases of dermatitis, so-called erysipelas; two or three cases of axillary abscesses (adenitis); three cases had suppurative inflammation and sloughing. He saw twenty-five cases of this kind in four years, and believes that the patient enjoys the same immunity from variola as in common cases of vaccination. One such case, a nursling, was taken to the small-pox hospital with its mother, for some peculiar reasons, and was there a week without becoming infected. Dr. DeWolf has also observed three cases of diphtheritic membranes forming over the point of inoculation. Re-vaccination is not appreciated by the people, and he calls on every physician in the city to bring his influence to bear on that point, for he is well aware that the few centers where small pox is now discovered, are precisely those where vaccination has received most opposition from an ignorant class, mostly composed of foreigners, who perpetuate the disease in their midst.

ARTICLE VIII.

MICHIGAN STATE BOARD OF HEALTH. Reported for THE CHICAGO MEDICAL JOURNAL AND EXAMINER.

The regular quarterly meeting of this board was held at Lansing, Tuesday, April 12, the following members being present: Rev. D. C. Jacoke, of Pontiac; Henry F. Lyster, M.D., of Detroit; Arthur Hazlewood, M.D., of Grand Rapids; and Henry B. Baker, M.D., Secretary. Dr. Lyster was elected President *pro tem.*

A letter from Prof. Kedzie, President of the board, announced his decision to decline the reappointment as member of the board, for the reason that his duties as professor at the Agricultural college were such as, in the opinion of members of the board of agriculture, would prevent his giving that attention to the work of the board of health which he had heretofore done. His communication outlined the great progress in public health measures in this State since the organization of the State Board of Health eight years ago. He saw with pride that nearly every city, village, and township in the State now has its board of health and health officer. Kerosene explosions, so common eight years ago, have forever been banished. Everywhere in the State there is evidence of an advance in the stamping out of infectious diseases. The ventilation of churches, school houses, and dwellings now receive an attention never known before. The water in our wells, the drainage of farms, and the sewerage of houses have all been brought into prominence by the labors of the board. In this work the board had been greatly assisted by the public press, but the press itself has been stimulated by the work of the board. In short there has been a general advance along the whole line, but we have kept such even step in this advance that we only become aware of our changed position by comparison with the landmarks of eight years ago. Last, but not least, among the agencies set in motion for the public health, he noticed the sanitary conventions for discussion with the people of all matters relating to their physical well-being. He believed they were

fraught with inestimable good to the people of our State. The forces which are thus set in motion are not temporary in their influence, but will flow on in a stream of blessings to the end of time. The information gathered by the board needs to be scattered broadcast among the people. New and original investigations into the nature of contagious diseases, and the means for arresting them, need to be undertaken and pushed forward by the board. The information gathered will be of small benefit if imparted to only a few. The State cannot afford to hide this light under a bushel.

In bidding farewell to the State board of health Dr. Kedzie gave the assurance that he did so with the kindliest feelings towards all its members, and with an earnest wish for its highest prosperity and usefulness.

Resolutions were passed expressing extreme regret at the necessity which compelled Dr. Kedzie to decline to serve longer with the board; also, expressing the high appreciation of the board for the eminent labors of Prof. Kedzie in the interests of the public health of the State. The election of his successor as President was postponed until the next meeting of the board.

THE FILTH OF OUR CITIES.

The Secretary presented a communication from C. H. Voute, giving statistics of the filth removed from privies and cesspools in various places in the State, by means of the odorless excavating apparatus. During the time—about a year—the number of tons removed, is, approximately, as follows: East Saginaw, 850; Bay City, 580; Lansing, 93; Charlotte, 61: Jackson, 151; Ionia, 78; Flint, 118; Battle Creek, 60; Kalamazoo, 258; in the State about 2,300 tons, or 15,000 barrels, and of that amount but 2,000 barrels could be pumped out, the remainder being removed by the "pitting" process, showing the liquid portion had mostly drained off into the soil, which must be much saturated with filth, and as a consequence many wells must be contaminated.

OIL INSPECTION.

Communications had been received from different parts of the State, stating that it was customary for deputy oil-inspectors to

inspect a few barrels of oil from a carload and brand as "approved," and collect pay for inspecting the whole carload. One of the statements was, that the inspector did not test every barrel even when his test showed at least three different grades of oil in the carload. The questions were, whether this was an honest fulfillment of the law, and whether the public safety is thus conserved. The Secretary was directed to take action for ascertaining.

SICKNESS CAUSED BY PUTRID MEAT.

A letter was presented from John Mulvany, M.D., Surgeon in the British Navy, detailing the effects of food rendered unwholesome through putrefactive taint. All of the crew of a large merchant vessel that put into the Falkland Islands, who ate of pork, opened on a certain day, became ill, and the illness continued until the ship was disabled and medical assistance was sought for in the Falkland Islands. There it was found that not only the pork but the beef was bad, and the meat was condemned by a board of surveying officers. Seven of the affected died, and *post mortem* examination revealed immense effusion into the pericardium, a stench from the brain and congestion at the point of the calamus scriptorious in the fourth ventricle, with congestion of the jejunum and ilium. During life the chief symptoms were paralysis of the hands and feet, and agonizing pain in the toes; uncontrollable sleeplessness, loose bowels, stench from the skin, etc. Symptoms entirely *sui generis*.

The board requested Dr. Mulvany to present a complete account of the sickness.

DISEASES OF ANIMALS.

A letter was presented from A. J. Murray, U. S. Secretary of the State Cattle Commission, relative to the desirability of collecting statistics of deaths from contagious diseases of animals in all parts of the State. This work might properly have been done by the State Cattle Commission, if it had any funds, but a bill granting them an appropriation of $500, which was passed by the senate was defeated in the house of the present legislature.

Letters were also presented relative to glanders in Clinton and Shiawassee counties.

SANITARY CONVENTIONS.

Invitations to hold sanitary conventions during the coming winter were accepted from Coldwater and Ann Arbor.

DETROIT BOARD OF HEALTH.

Dr. Lyster, chairman of the special committee of the board, to devise a plan for a board of health for the city of Detroit, reported that he had in consultation with the city attorney and other citizens drawn up a bill providing a practical and scientific board of health for that city, and the bill was now before the legislature.

SANITARY SCIENCE EXAMINATIONS.

The annual examination of applicants in sanitary science will be held Tuesday, July 12, 1881; it was voted that the examination should be written, and that each member should submit ten questions not heretofore asked, and on subjects connected with their work as regular committees. Candidates successfully passing the examination will receive certificates that they are qualified to act as health officers in any city, village, or township in the State.

CONTAGIOUS DISEASES.

It was decided to print revised editions of the documents on the restriction and prevention of each of the three diseases, diphtheria, scarlet fever, and small-pox. Arrangements were also made for the translation of these documents into the Holland and German languages.

"WINTER CHOLERA."

The Secretary reported the prevalence of a peculiar type of diarrhœa in some portions of the State during the past winter. The fact of its greater prevalence in the southern portions of the State, and that cases have been reported from two State institutions and from towns in the northern part of the State, dependent upon Chicago and Southern Michigan for their food supplies, might indicate a connection between the sickness and the use of oleomargerine, butterine, products of diseased pork, or meat, or other food.

The next regular meeting of the board will be Tuesday, July 13, 1881.

ARTICLE IX.

CHICAGO MEDICAL SOCIETY.

Stated Meeting, April 18, 1881. Dr. E. Ingals, President, in the chair.

The three new members proposed at the last meeting were elected.

VACCINATION AND VACCINE VIRUS.

Dr. N. S. Davis related three cases in nursing children, who, not being susceptible of vaccination, had been exposed to small-pox without taking the disease; and made the inquiry: "Should nursing infants under two or three months of age be vaccinated?" He also inquired whether bovine virus was a better protective than humanized virus?

Dr. W. E. Clark said he generally declined to vaccinate infants because he had once had a case of adenitis, and had seen other bad results.

Dr. O. C. DeWolf, Health Officer, said he had young children vaccinated with a good result. Of several cases which had been afterward taken to the Small-Pox Hospital with their mothers, not one had contracted the disease. As to the greater immunity conferred by bovine virus, it was doubtful. Dr. Jones did not use bovine virus because very young children were less susceptible to it, and because the arm was made more sore by it. Dr. DeWolf related that a mother had been taken with variola a few days ago who nursed a baby two days old. It was not vaccinated, and was fourteen days old to-day, the time when the eruption should have appeared; but the infant has just died in convulsions, probably being overwhelmed with small-pox, although no symptom manifested itself before this. Had the child been vaccinated, it would have lived. He had never seen a fatal case in one who had been vaccinated. The Health Department employed bovine virus exclusively, because more readily obtained. The disease was not at all modified by old vaccinations, some had confluent small-pox who had many cicatrices on their arms. Eighty-nine per cent. of the cases of secondary vaccination were successful,

and he never saw a case of small-pox among them in four years.

Dr. John Bartlett said that children who were not susceptible of vaccination might take small-pox, he had observed six different cases of that kind, two of them in the practice of Dr. Byford.

Dr. E. Ingals believed the rule to be that a case which resisted vaccination, did not easily take small-pox. He had been vaccinated many times, only the first successfully, and he was subsequently exposed to small-pox a great deal, but finally took varioloid from a case of confluent small-pox. He inquired whether a repetition of vaccination within a few months would take?

Dr. R. S. Hall had seen a successful case of that kind, and had no doubt that if we should re-vaccinate some weeks after the first vaccination had taken, many cases would prove successful.

Dr. Jane E. Walton re-vaccinated a child after six days, and both vaccinations were successful.

Dr. N. S. Davis said that immediate re-vaccination was the only test of a good vaccination and should be tried; the great majority of cases were not susceptible to it. He thought the time for compulsory re-vaccination might be fixed between the age of sixteen and twenty-one, and he thought the majority would be safe for a life-time. But he mentioned that some diseases like typhoid, or some change of climate, might interfere with the immunity conferred by vaccination. He had always used humanized virus until a year ago. He had never seen any bad results follow.

The Society now drew up resolutions on the occasion of the death of Dr. Mills Olcott Heydock, M.D., which happened on April 17. Dr. Heydock had at one time occupied the Chair of Materia Medica in the Chicago Medical College.

Dr. DeLaskie Miller was elected a delegate to the International Medical Congress, and the Society adjourned.

The West Chicago Medical Society has not held a meeting for two months. The immediate cause of it is a want of attendance on the part of members.

Original Translations.

ARTICLE X.

ON GOUTY DYSPEPSIA, OR GOUT OF THE STOMACH. By Prof. Germain Sée.

Gouty dyspepsia, or gastric gout, is surely a rarer affection than is generally asserted; its existence is altogether denied by Watson, who refers it to common violent irritations following excesses in eating. Brinton asks, what is understood by gout of the stomach, and comes to the conclusion: There may be hepatic colics, or uræmic manifestations, which in gouty subjects are said to be a metastasis of gout to the stomach, but, besides these errors, there is nothing left constituting a special disease, nothing worthy the denomination of gastric gout, a term which patients, imbued with medical principles, abuse in so strange a manner; but this negation, this willful disregard of facts, adds more evidence to the truth that this is an obscure subject, and these symptoms which cannot be denied, are not easily accounted for.

My experience with these various forms of gout has demonstrated to me the following:

(*a.*) There exists an *ante-gouty, pseudo-dyspepsia;* it is a forerunner of gout, a first premonitory symptom, coming on very early so that Ford said it was the cause of that disease. Patients complain of digestive disturbances, with feelings of compression, squeezing, or more generally of fullness in the epigastrium, of distension of the abdomen, eructation, pyrosis, tympanitis, constipation, and hæmorrhoids; this affection has been described of old, and is yet known in Germany under the name of *abdominal venous plethora.* Is that a true

dyspepsia? Not at all. It is one of those atonic states of the intestine, with or without constipation, with or without hæmorrhoids, which are often observed to follow excesses in eating, in atonic, weak or obese individuals; it is a false dyspepsia, deserving the title *ante-gouty* in the sense that it is the *habitual temperament* of gouty subjects.

(*b.*) *Acute paroxysmal catarrhal dyspepsia.* Before the crises of gout, and while they last, we often observe signs of the condition commonly known as gastric troubles, or acute mucous catarrh. The patient loses appetite, his tongue becomes coated, his digestion slow, difficult, with metorism and eructations, is always accompanied by much uneasiness, by a sensation of lassitude and despondency, as if a serious disease was impending. There are patients who never suffer crises of gout, but these are preceded by such gastric trouble, as a sort of premonitory symptom unaccompanied with fever. This gastric difficulty may last through the whole attack, especially if it is a severe one. Is that a truly gouty phenomenon, or is it not one of those perturbations of the secretions, which we might call acute mucous dyspepsia, of the common kind, as we sometimes observe in the beginning of acute diseases? If that state persists during the evolution of articular gout, it ordinarily manifests itself under the form of a persisting anorexia of which pain in the joints is a frequent concomitant. Let us call that state *acute catarrhal dyspepsia.*

(*c.*) *Acute and true uræmic dyspepsia.* Here is presently a series of phenomena which are briskly manifested during an attack of gout, or while this is on the wane; it violently appears as a *cardialgia.* The patient is taken with cramps and colics in the stomach, with constant hiccough and pyrosis, followed by repeated emeses of acrid matter; resembling cases of poisoning, with symptoms pertaining to peritonitis, which may induce lipothymia, or even syncope with cooling of the surface of the body, passive algidity of limbs and face, with a livid discoloration of the lips. Is not this uric acid poisoning? Had injections of that acid into the blood been followed by other than negative results, one would be tempted to ascribe a toxic cause to that cardialgia, referring it to the sudden introduction of an excess of uric acid in the blood; lacking such data, we confine ourselves to

its mode of elimination; for we know that the stomach is the true excretory organ by which urea is thrown out after accumulating in the blood, on account of some alteration of the kidneys; the same is true of uric acid, which is equally eliminated by the stomach; but the presence of an excretory product in the gastro-intestinal mucous membrane, could not fail chemically to alter the gastric juice and give rise to a serious dyspepsia with all the symptoms of uræmic poisoning. The main point is to find out the cause of this sudden invasion of uric acid into the blood, and thence into the stomach. Here we come to the doctrine of metastasis. If, in reality, cardialgia arises when the crisis in the joint recedes, we may believe that uric acid which had invaded the joints is entirely reabsorbed into the blood, which eliminates it through the stomach; but such is not always the case, this mutual relation is not all constant; cardialgia may take place without any improvement in the joints; retrocession could not be advocated in cases of that nature; but it remains just as evident that uric acid, circulating in moderate quantity in the blood, may be eliminated by the mucous membrane of the stomach, giving rise to a series of serious symptoms by its passage.

Why such a sudden elimination? The only solution is that in a certain number of cases of poisoning, as by anthocthonous poisons, there is always some tendency for the elimination to select an excretory organ in particular and leave the ordinary way of excretion. In a clinical point of view, it is now proven that there exist dyspepsias, accompanied with *urœmic cardialgia*, which often bring a real danger to the constitution.

These are the three types of dyspepsia which arise more or less directly from gout, other types are allied to the common affection; a gouty patient may suffer from a dyspepsia depending on an irregular diet, he may be a subject to chronic gastritis (Ebstein); but these are referred to dyspepsias in general, and are devoid of characteristics.—*Le Médecin Praticien*, March 5.

Foreign Correspondence.

ARTICLE IX.

KIU KIANG, CHINA, Feb'y 25, 1881.

MESSRS. EDITORS:—Previous to my departure for China, I gave you a promise to write to your JOURNAL in regard to the *native medical practice* of China. I have delayed so long on account of the impossibility of gaining any definite idea of the subject until I had acquired a knowledge of the language of this country, and even now I hesitate to impart the little knowledge I have gained, for fear it may not have come from the most reliable sources.

I have in my circle of native friends three literary gentlemen who practice medicine. One of them is a member of a Christian church, and seems to have great confidence in foreign practitioners, and occasionally comes to me with patients whom he is unable to cure.

From these native physicians I have learned many things in regard to their methods of treatment and knowledge of general medicine, and I will now relate a few of these facts, giving you the privilege of printing any or all of them, as you see fit.

The native physician of China is a member of the literary class, and well versed in the philosophy of Confucius—of medicine he is not required to have any special knowledge. There is a law by which physicians and druggists are held responsible for errors in prescriptions, but the native never takes advantage of it.

The creation of a physician generally comes about in the following manner: A Chinaman is seriously ill; he sends for the literary relative (or relatives, as the case may be) of the family for advice. The literary gentleman searches all the works on

medicine at his disposal, and treats the patient according to directions. Should that literary man happen to be successful in his treatment, his fame is spread abroad, and ever after that he is consulted as a specialist in that particular disease. There is no doubt that many a man of the most unreliable character makes his way to the front of the medical ranks in this way, and doubtless many a life is sacrificed thereby.

The *last resort*, in serious cases of sickness, is that of administering fresh warm human flesh to a dying person, and it is said there are many monuments in China erected to the memory of women who have allowed themselves to be butchered for their husbands, brothers or fathers. I have yet to learn of a case where either the dying man or the person from whom the live flesh was cut recovered; unfortunately, however, the *physician* usually survives the operation. Fortunately this custom is not a common one.

Consumption, dropsy, obstinate vomiting, and insanity, are considered incurable by native physicians.

Practice is divided into (1) Outside, (2) Inside, (3) Diseases of Women, (4) Diseases of Children, and (5) Eye Diseases.

Outside diseases comprise skin diseases, abscesses, burns, fractures, and all other diseases that are apparent on the surface of the body.

Inside diseases comprise all those that are not apparent on the surface, excepting those mentioned below, and are diagnosticated by the pulse.

Diseases of Women comprehend any kinds of ill the female is afflicted with—be it uterine or otherwise—excepting *outside* diseases.

Diseases of Children and *Eye Diseases* indicate the same disorders that we comprehend under these titles.

Anatomy and physiology are comparatively unimportant studies for the native physician. Not long since I asked a physician where the liver was situated, and he was undecided as to whether it was on the right or left side.

The human body is divided into five organs and six viscera. The five organs are the heart, lungs, spleen, liver and kidneys;

the six viscera are the stomach, gall-bladder, intestines and three functional passages (rectum, vagina and urethra.)

Very little is said of muscles, tissues, bones and joints. Blood-vessels are supposed to be channels through the flesh. In reply to my question to a physician, "How do you account for motion in a part?" he said, "The blood and the breath go into the part and cause it."

Nothing is known of nerves. The brain is called "a great sea of marrow," and controls the marrow of the bones. Marrow is very essential to health. In childhood it is scant, in healthy middle-age very abundant, and in old age the bones are hollow. If a child cannot walk, it is because the bones of the legs contain no marrow.

The heart is the seat of thought and moral character. Many physicians believe the heart possesses even eyes. These eyes are very brilliant in intelligent people, and very sleepy in stupid ones. It has been gravely decided that the head must be the seat of the memory, because people have been observed to scratch the head when trying to recall events of past time. The heart rules over the blood, the brain over the marrow, the spleen over the flesh, and the kidneys over the bones. The *life* is a small *organ* situated between the kidneys. Chemistry is an unknown science. The elements of the universe are metal, wood, water, fire and earth. The heart is controlled by fire, the liver by wood, the lungs by metal, the spleen by earth and the kidneys by water. The organs of speech are situated in the lungs.

The liver hoards up the blood. The heart and the small intestine are said to be intimately associated. The lungs have a close relation to the large intestine. The kidneys control the bladder, though the natives know of no connection between the two. The spleen governs the stomach and the liver rules over the gall-bladder. The process of digestion is as follows: There are two tubes opening into the pharynx—one from the lungs and another passing to the stomach. The food passes down the latter tube into the stomach, and keeps up a constant motion, by means of which the food is digested. Thence the food passes into the small intestine, when the good food passes

into the blood-vessels. The waste matter proceeds to the large intestine, from whence the waste *solid* matter goes to the rectum, and the waste *fluid* matter to the bladder.

In materia medica the varieties of drugs are very extensive, and their application as various as would naturally result from the irregularities of the native physicians. Sulphur is used for scabies, and mercury for syphilis. Arsenic is used as a caustic, though strictly forbidden for skin diseases. Tiger's flesh and bones are used for making tonics. Not many weeks ago a huge beast of this sort was brought to me in the hope that I would purchase it for my dispensary. It had been shot in the mountains not far distant from Kiu Kiang. The fæces of various animals, as well as crystals prepared from urine, are common medicines. A vegetable oil is administered frequently in consumption. Musk is said by the natives to be stimulating, antispasmodic, expectorant and anthelmintic. Sugar-water is the domestic remedy among the natives for vomiting. Vermillion is used as an antispasmodic. I have seen two cases of paralysis this year, due, it was claimed, by the patient's too powerful medicines, administered by a native physician—one case was said to have resulted from the use of vermillion. Unfortunately circumstances did not permit me to make a very thorough examination of either case.

Undoubtedly the most interesting department of native practice is therapeutics—it is also in this line that one might learn a few things of value to the general medical profession, had one time and opportunity to search in this direction. However the value of such research is readily overestimated, unless one considers the utter lack among the natives of real knowledge of the fundamental branches of medicine, without which but little advance can ever be made. The diagnosis of internal diseases by means of the pulse, is reduced to an exact science. The principal directions for conducting examinations are as follows: If the patient be a male, feel the left (the side of honor) pulse first; if it be a female, feel the right pulse first. Supposing one is dealing with a male: place the first, second and third fingers on the radial pulse of the left side, at some distance apart if he be an adult, close together if it be a child.

The first finger distinguishes diseases of the heart and diaphragm; the middle finger diagnosticates diseases of the liver and gall; and the third finger diseases of the kidneys, small intestine and bladder. Now, placing the fingers on the right radial pulse, the first finger distinguishes diseases of the lungs and chest; the middle finger, diseases of the stomach and spleen; and the third finger, the *life*, large intestine, and general condition of the body.

There are four main divisions of the pulse—a floating, sunken, quick and slow pulse. These constitute four headings, that are subdivided into twenty-seven different varieties, such as large, small, coarse, fine, etc.

Uterine trouble is recognized, but no varieties of the disease are distinguished, so far as I am able to learn. It is treated as a symptom of a general anæmic condition, and tonics administered therefor. There is no doubt that uterine disorders of all kinds are exceedingly common in China. Native physicians say ninety per cent. of the women are troubled with leucorrhœa.

An "ague nest" of phlegm and blood is said to form in the left side of patients suffering from malarial poisoning. It is pro nounced incurable, and is in close connection with the liver.

Tumors of the abdomen are *real* or imaginary. There is a variety of tumor which forms in the abdomen of men who are given to strong drink. Sometimes it comes out of the mouth during life, and it resembles a snake, centipede or mud-turtle!

There is also a large tumor mentioned in native works, which grows on the lower part of the back (*exceedingly rare!*) and when it is cut open, live pediculi escape!

Auscultation and percussion are never practiced. Only the most skillful physician can differentiate ascites and tympanitis. A short time ago a young boy was brought to me with acute Bright's disease. As his life was endangered by an immense accumulation of fluid in the abdomen, and every other means of removing the fluid failed, I performed paracentesis—to the great astonishment of native physicians and the friends of the family. I was afterwards closely questioned in regard to how I knew it was water instead of gas in the bowels, as all the native physicians who had seen the case had been unable to decide.

The natives divide consumption into that of the lungs, heart, liver, spleen and kidneys. In all these forms it is considered incurable.

Not long since a babe, one and one-half years old, was brought to me for treatment after the native physicians had given up the case. They had pronounced it a case of consumption, and fed the babe on stewed pig's liver. I learned that the mother's milk had failed several months before, and the child was being raised (according to Chinese custom) on rice-water. The babe eagerly devoured everything in the shape of food presented to her, and on beef and chicken broth, eggs and cows' milk was restored to good health in two weeks.

Paralysis is said to be due to three causes: (1) a wind suddenly blows upon a part and dries up its juices; (2) the blood no longer flows to the part; (3) there is some obstacle to the free entrance of breath to the part.

Insanity is possession by an evil spirit, the result of mental excess, or the result of an accumulation of the juices of the body between the heart and diaphragm.

Convulsions are due to an accumulation of juices about the heart. No differentiation is made between epileptiform convulsions, apoplexy and syncope.

Generally a person is considered dead when he faints, and when he recovers, he is restored to life again.

There are two varieties of convulsions in children, *slow* and *sudden* (acute and chronic). The latter variety is easily cured; the former variety is due to an inherited dyscrasia, and cannot be cured, but slowly spreads to the spleen, and in spite of caustics, pinching, purging and tonics, the child eventually dies. The method of distinguishing the two varieties is as follows: Either take hold of the hand or foot and shove forward the integument of the palm or sole (as the case may be) with the thumb, or gouge the flesh of the knee, elbow or furrow in the upper lip, with the thumb-nail, or pick up the skin in these places and break the skin connection.

In case these modes of treatment do not cure the child, use the caustic treatment. This consists in twisting a bit of red paper

to a point, then dip it in gesamum oil, light it and touch it to the flesh in various parts. If it be a case of sudden fit, the child will quickly recover thereafter; if the child does *not* flinch from the fire the case is incurable.

The regulation of the diet is a very important consideration with the native physician. Melons are considered fatal in effect if eaten in any disease. In diarrhœa and fever, meat and oil are prohibited. In cases of abscesses one must be careful about eating articles of food that *work* like yeast. To this class belong fish, flour, chickens, and more especially pumpkins. In dropsy no salt is allowed for a full year. In consumption *white ducks* are allowed, but no chicken nor fish. For indigestion, eat arrow-root, flour and soft cooked rice. A few lumbricoids in the alimentary canal are considered very helpful for digestion.

Surgery is limited, mostly, to the opening of abscesses and the extraction of teeth. A fracture is never treated so that the part regains its full use. The use of sutures in extensive wounds is unheard of except in the neighborhood of foreign practitioners. Last summer, having an occasion for sewing up a wound, I did so, to the great astonishment of the natives, who speedily spread the report, "She can make seams in the human flesh! Who ever heard of such a thing before?"

I have been assured by the natives that a felon can be aborted by the early application of a pig's gall-sac, and that it quiets the pain almost instantly.

The department of obstetrics is left entirely in the hands of midwives, and consequently many a woman dies for the want of medical aid. During the month of January last, I was called to two cases where the midwives had failed in effecting delivery.

Case No. 1 was readily relieved by aid of forceps, and was doubtless the result of inattention to the bladder, which was enormously distended with urine.

Case 2 was a shoulder presentation. The liquor amnii had escaped two days before I was called, and decomposition had set in, in the protruding arm. In this case embryrotomy was the only resort practicable. The mother made a good recovery.

In order to show the varieties of diseases one meets with in

China, I will add that in the past year I have treated cases as follows:

Diseases of respiratory system, 70; diseases of alimentary system, 83; diseases of nervous system, 8; febrile disorders, 122; urinary and renal, 7; heart diseases, 9; miscellaneous medical, 62; gynæcological and obstetrical, 42; eye and ear, 115; skin, 59; surgical, 76; venereal, 122.

Leprosy is rarely seen in this province of China.

In conclusion, I would like to say, that if you have any charitably disposed Christian medical students who would find it a pleasure to heal the sick and preach the gospel to the poor, they can find no better opportunities for doing both than China, and a medical missionary's life offer. But, alas, I fear many would prefer to stay in America and soar as high as their ability permits, and all this self-denial (of a very extensive practice and opportunities that home can never afford), they make for fear of running athwart that time-honored saying, "Charity begins at home."

If you could suggest any particular lines of investigation that could be carried on without expenditure of any great amount of time, I should be pleased to follow your suggestions, both for my own sake and for the opportunity of contributing something interesting to the columns of your journal.

For lack of time in which to make a carefully written article for the press, I write simply a letter, allowing you to choose therefrom that which is worthy of publication.

Very sincerely yours,

KATE C. BUSHNELL.

EPIDEMIC WINTER DIARRHŒA.—This has prevailed in this and other cities East and West lately. It is the general impression with our local physicians that it is a follicular enteritis. As to treatment, the universal testimony is in favor of the free use of bismuth. Anodynes and mild astringents are also useful. No death from that disease is reported.

Domestic Correspondence.

ARTICLE XII.

BOSTON LETTER.

MESSRS. EDITORS:—In my February letter I mentioned a discussion upon the paper of Dr. James H. Whittemore, Resident Physician of the Massachusetts General Hospital, upon the abuse of the medical charities of Boston. The outcome of the matter is a circular recently issued by order of the trustees of this hospital, which wisely sets forth that "On and after the first of April the out-patient medical and surgical service will be restricted to such sick and disabled poor persons as are unable to pay fees. No others will be treated." The circular further states that this restriction has been compelled by an increasing attendance in this department, which already is overcrowding the resources of the hospital, and if allowed to continue will soon become unmanageable. During the year 1880 more than 37,000 visits were recorded. It has been discovered that many of these patients were not in need of charitable treatment. They quite inconsistently come long distances at considerable expense, and interfere with patients who are actually too poor to pay either fees or fares. This is a species of facial sclerosis which will no longer be tolerated. The medical attendance under the administration of this department of the hospital, has more than doubled within a single decade. The trustees appreciate the embarrassing condition of things, and while they will take firm stand hereafter in protecting the interests of the deserving poor, the limited funds of the hospital, and the proper management of their out-patient department, they will at the same time give a lesson in self-respect to the parasites who naturally will try to continue

their robbery of the hospital and of the outside physicians, to whom their cases, and the fees they should pay, fairly belong. Certainly this vigorous action on the part of the trustees should serve as an example in other cities as well as in our other medical charities. At first there will probably be some difficulty in separating the sheep from the goats, but news of this nature usually flies swiftly, and we may expect to see the number of hypocrites rapidly diminish.

I suppose that no class of workers in this busy world is so much abused and so little appreciated as physicians. We all know that but comparatively few persons find any pleasure in paying a doctor's bill. "Gratitude in a patient," says a quaint writer, "is a symptom of the disease, and it steadily lessens as the patient grows better." The doctor needs the fee for which he has given his time, experience and knowledge, but I trust he has a higher object in view, and if he relieves his patient, the satisfaction he thus derives should certainly be of greater value to him than mere money. If at the same time he receive an expression of grateful appreciation from his patient, he feels that the anxiety and care which the case has cost him have met a due reward. But the coolness with which many call for the physician's advice, without the slightest intention of making any return for it, and the settled belief in their warped brains, that the doctor's counsel costs him nothing, and that therefore he might just as well *give* it as *sell* it, indicate a moral strabismus which is past the understanding of all but the crookedest of pocket-picking human beings.

To turn to a more congenial topic: We have a Hospital Newspaper Society which is doing a most kindly and meritorious work. From boxes in the railroad stations, during the past year, over eighty-three thousand newspapers have been collected for daily distribution in the Massachusetts general and city hospitals. Sixty-three hundred magazines and books have been sent to various insane asylums, reformatory schools and lighthouses. Three thousand Christmas cards were sent to the insane, much to their delight. The report of the society shows that not only light reading, but books and magazines of solid character, have been equally appreciated. One poor fellow in an insane asylum

has been kept quiet and happy by an *algebra* ever since he received it. Hardly anything in the shape of reading matter comes amiss, and much more could be used.

If the king who entertained his horses by means of orchestral concerts lived in our day, he doubtless would insist upon giving the patients of his hospitals something better than mere bare, white walls for mental recreation. There must be a vast amount of depression among the sick in our public institutions, which cannot be relieved by a daily visit and *ter in die* doses of hospital compounds. If the minds of these people could be enlivened by cheering mental food of any nature, who doubts that the average death-rate would be lessened and the average duration of illness be shortened? The *London Spectator* has lately advocated the introduction into hospitals not only of flowers and plants, but of paintings, statuary and other works of art and beauty. It is a wise, a very wise suggestion. "Patients will tell you," says the *Spectator*, "with something like enthusiasm, of their joy as they heard the swish of the swaying, wind-tossed trees under their chamber windows, or watched the twinkling motion of the leaves of a tall poplar, the top of which might be seen from their beds. They never forget how they chanced in their many waking hours to see the moon hovering over a neighboring spire—like the dot to an i, as Alfred de Musset has it. A chance flower, a bit of verse repeated by a nurse, a scrap of music wafted from the street below, a pretty sentence in the letter of a friend, will thrill them as they never were moved before, and will cling, limpet-like, to their memories. 'I shall never forget,' says one, 'the rapture of fever patients over a bunch of bright-colored flowers, and the sight of the baby was sometimes more to patients than the visit of the doctor.' Nurses will tell you that there often comes to the most callous and withered human beings, in these times, a restless longing to see something fresh and beautiful, and that the most obtuse betray a craving to look out of the window. These are the times when the parched mind, barely capable of bearing the cheap, common grain of life, seems to show possibilities of fruit and flower; and why not use the opportunity?" The *Spectator* thinks the development of art in hospitals would be beneficial to artists as well as to the sick. For it would prac-

tically do away with the complaint among the best and most earnest-minded artists, that they so often have to paint for rather frivolous objects, quite unworthy of their capabilities. Their best pictures would no longer be buried in private houses, but would be the means of achieving great good. This opens to the charitable among the wealthy an opportunity to devote their money to a most useful and noble purpose. Let them ornament our hospitals with good and influential pictures, whether paintings or engravings. In some of the London hospitals there are pictures which not only break the monotony of the customary blank and cheerless walls, but they act most pleasantly upon the bed-ridden unfortunates who have them in view. Why not encourage this species of charity and good-feeling in our own country?

Art in connection with clinical teaching has also been suggested of late. In a lecture upon the anatomy of the joints, Dr. W. W. Keen, of Philadelphia, and Professor of Artistic Anatomy in the Pennsylvania Academy of the Fine Arts, made use of a living model to illustrate and demonstrate his subject. It was then that he affirmed that the living model should form as indispensable a part of the means of illustration in the anatomical lecture room as the cadaver. When we think of what uses might be made of such a model, it becomes very apparent that Dr. Keen's suggestion is one which deserves practical adoption.

The new medical college to which I have alluded in a former letter, is a curious puzzle to the general medical mind of Boston. The common hope is that it will do no harm. The fact that its advertisement is admitted to the pages of the *Boston Medical and Surgical Journal* proves nothing more than that this is probably a quieter method of disposing of it than its rejection. One of the professors of the school applied for admittance to our State society. During his examination, he stated that his dose of the potassium iodide was one to two drachms, but added that he did not use it in his practice. This proves whatever you think best.

Before our State legislature is a bill "to prevent incompetent persons from conducting the business of apothecaries." The requirements of the bill are quite stringent, and it is hoped it

may pass. We do not forget, however, the ease with which the bill for the regulation of the practice of medicine was defeated last winter, and therefore are not over-sanguine in our hopes of the good fate of the pharmacy bill. It is a matter for sincere rejoicing that in spite of the freedom with which Tom, Dick and Harry are allowed to compound prescriptions and do counter-practice, there are comparatively so few ill results. But the dangers of illegitimate and ignorant pharmacy are immense, greater probably than those of quackery. May the day soon come when our country will be protected by medical and pharmaceutical laws as strict as those now in force in Germany.

BOSTON, April, 1881. * *

PATHOGNOMONIC SIGN OF FRACTURE OF THE NECK OF THE FEMUR.—Dr. Bezzi draws attention, in *Lo Spallanzani*, to a sign which is pathognomonic of fracture of the neck of the femur, but which is not generally known (*Buffalo Medical and Surgical Journal*). In examining the space between the trochanter and the crista ilii, it will be found that while, on the sound side, the muscles occupying this region (the tensor vaginæ femoris and the gluteus medius) are tense, and offer to the hand a considerable feeling of resistance, they present on the affected side a deep, well marked depression, a flaccidity, and diminution of tension, from displacement upward of their points of insertion.

THE INFLUENCE OF INJURIES AND SURGICAL OPERATIONS ON HEREDITARY DESCENT.—"M. Mason, of the Royal Academy of Belgium, has experimentally demonstrated that the removal of the spleen in the parent will insure a rudimentary state of that organ in the offspring. The animals experimented upon were rabbits, and the atrophic spleen of the descendant of an operated animal weighed only 9.32, the bodily weight being 1.472 grains. In the second generation of these descendants the atrophy was not more pronounced than in the first."—*Chicago Medical Review, March* 20.

Reviews and Book Notices.

ARTICLE XIII.—A MANUAL OF THE PRACTICE OF MEDICINE. DESIGNED FOR THE USE OF STUDENTS AND THE GENERAL PRACTITIONER. By Henry C. Moir, M.D. 12mo, pp. 454, cloth. New York: Steam Press of the Industrial School, H. O. A., 1881.

There is a want felt by the students of medical colleges, we are sorry to say, for concise manuals, or mere groupings and tabulatings of the most important facts known in medicine. By their help, any school boy, and some who have never been to school, (provided they can read) can commit to memory enough definitions and opinions to become a medical gentleman in a couple of four-months terms. The book under notice supplies such a want better than any other one that we know. Taking for instance, "Croupous (Lobar) Pneumonia. Stages: *First*, engorgement; *second*, red hepatization; *third*, gray hepatization. Etiology. *Predisposing causes:* Age (most common between twenty and forty); sudden change in temperature; poverty; intemperance. *Exciting causes:* Exposure to cold or wet (as chilling of the feet or body); special diseases (as exanthematous fevers, uræmia, pyæmia, septicæmia, alcoholism, etc.) Traumatism." Follow thirteen rational symptoms in order, and fifteen physical ones. "Differential diagnosis: From cerebral disease (which?) and cerebro-spinal-meningitis (in children); from pleurisy in all its forms; phthisis (second stage; from capillary bronchitis, and pulmonary œdema." In the treatment of typhoid fever: "*Quinine in large doses*, 30 *to* 40 *grains within two hours, or* 10 *grains every half hour for four doses*, etc. This is also advised in small-pox, whenever the temperature rises above

104°. As a rule, however, we must say that this book embraces a "résumé of such standard works as those of Niemeyer, Roberts, Loomis, Da Costa, Bristowe, Hartshorne, and others," and is not quite devoid of value, especially to students waiting in the antechamber of the *green room*. It is beautifully printed, with *leading* and entirely blank pages, every here and there. In enumerating symptoms, each one has a separate line, and 45 pages, devoted to prescriptions, contain 26 pages of printed matter only. So that the whole work might have advantageously appeared in a pocket-book of 200 pages, with quite a saving of money to the needy student.

ARTICLE XIV.—A TREATISE ON THE PRINCIPLES AND PRACTICE OF MEDICINE; DESIGNED FOR THE USE OF PRACTITIONERS AND STUDENTS OF MEDICINE. By Austin Flint, M.D., Professor of the Principles and Practice of Medicine and of Clinical Medicine in the Bellevue Hospital Medical College; etc. Fifth Edition revised and largely re-written. 8vo, pp. 1150, half Russia. Philadelphia: Henry C. Lea's Son & Co.; 1880. Jansen, McClurg & Co., Chicago.

This favorite old friend of medical students and practitioners, now appears with such valuable improvements, that it will certainly resume its place at the head of the "manuals" most used in this country. The want for a revised edition of this book has been felt in many medical colleges, especially since 1874, when the first volume of Ziemssen's Cyclopædia was published. A more valuable work is not found in the United States, while none of the foreign books are well adapted to our present wants.

From the Preface: "The labor of the revision has been shared by Dr. William H. Welch, Lecturer on Pathological Histology in the Bellevue Hospital Medical College. * * It may be claimed for the present edition that the eliminations, substitutions and additions render it essentially a new work * * the author ventures to hope that it may be found to represent fairly the existing state of the science of medicine with respect to the subjects of which it treats, and to reflect the views of those who exemplify in their practice the present stage of the progress of medical art." In the chapter on Phthisis, a disease which has been

so carefully studied and so successfully treated by the author, he says that he never met an inebriate who owed it to the medical use of alcoholics in that affection. As a valuable remedy in the treatment of whooping cough, oxalate of cerium has been forgotten. A feature of this manual is the variety of useful modes of treating diseases which are found to fill the expectations of the most sanguine, and open a wide field to clinical study and experiments. H. D. V.

ARTICLE XV.—A MANUAL FOR THE PRACTICE OF SURGERY. By Thomas Bryant, F.R.C.S., Surgeon to, and Lecturer on Surgery at, Guy's Hospital; etc. Third American, from the Third Revised and Enlarged English Edition. Edited and Enlarged for the use of the American Student and Practitioner, by John B. Roberts, A.M., M.D., Lecturer on Anatomy and on Operative Surgery in the Philadelphia School of Anatomy; etc. With 735 Illustrations. Large 8vo, half Russia, pp. 1005. Philadelphia: Henry C. Lea's Son & Co.; 1881. Jansen, McClurg & Co., Chicago.

For medical students this is one of the most valuable works on surgery, embodying as it does the views and experience of so eminent a surgeon as Mr. Bryant. It will even answer the purpose of many practitioners, but not as well as the classical work of S. D. Gross, or the late treatise of Agnew. American surgery has, since the rebellion, acquired a national character which should not be overlooked. Fractures and dislocations are not treated at sufficient length, less than 100 pages being consecrated to that important part of practical surgery, in such a manner that a supplementary volume, like that of Hamilton, would be needed to complete the work. The illustrations are all that could be desired. The additions of the American editor are most practical, and one wishes that they were more numerous. The half Russia leather binding of this and other volumes just published by the same firm, is very pretty, and will advantageously compare with all other bindings on the shelves of every library; though they have a disadvantage which they partly share with cloth covers, and are permanently injured if their sides are exposed to rain or water. H. D. V.

ARTICLE XVI.—STUDENT'S POCKET MEDICAL LEXICON: Giving the Correct Pronunciation and Definition of all Words and Terms in General Use in Medicine and the Collateral Sciences, the pronunciation being plainly represented in the American phonetic alphabet. With an Appendix containing a list of Poisons and their Antidotes; Abbreviations used in Prescriptions; and a Metric Scale of Doses. By Elias Longley, author of a "Pronouncing Vocabulary of Geographical and Personal Names;" "Eclectic Manual of Phonography;" and a Series of Phonetic School Books. 16mo, cloth, pp. 304. Philadelphia: Lindsay & Blakiston; 1879.

This dictionary contains about the same number of words as "Wood's Medical Lexicon," which is better known to students. The introduction of twenty new letters or signs, borrowed from various alphabets, seems more an incumbrance than an improvement in the pronouncing part. Besides the excellence of its typography, it has no special merit of which we are aware, and does not fill the want of a lexicon, wherein definitions of many new words in medicine should be found. H. D. V.

ARTICLE XVII.—AN INDEX OF COMPARATIVE THERAPEUTICS, WITH TABLES OF DIFFERENTIAL DIAGNOSIS, DOSE LIST, ETC. By Samuel O. L. Potter, M.D., President Milwaukee Academy of Medicine, etc. Chicago: Duncan Brothers; 1880.

"The object aimed at in this book is to present the therapeutics of the two great medical schools in the manner best adapted to comparative study and quick reference." The remedies recommended by some of the most eminent teachers in both schools (allopathic and homœopathic) are arranged in parallel columns for convenient references. The work is not exhaustive; only the outlines of the subject are given. It contains no new information. The chief interest of the book is the comparison between regular and homœopathic therapeutics. B. W. G.

BOOKS AND PAMPHLETS RECEIVED.

The Principles and Practice of Surgery. By D. Hayes Agnew, M.D., LL.D. Vol. II. Philadelphia: J. B. Lippincott & Co.; 1881.

Medical Diagnosis with Special Reference to Practical Medicine. By J. M. DaCosta, M.D. Philadelphia: J. B. Lippincott & Co.; 1881.

A Practical Treatise on Diseases of the Skin. By Louis A. Duhring, M.D. Philadelphia: J. B. Lippincott & Co.; 1881.

A Manual on Diseases of the Eye and Ear, for the use of Students and Practitioners. By W. F. Mittendorf, M.D. New York: G. P. Putnam's Sons; 1881.

Syphilis and Marriage. By Alfred Fournier. Translated by P. Albert Morrow, M.D. New York: D. Appleton & Co.; 1881.

On the Construction, Organization, and General Arrangements of Hospitals for the Insane. By Thomas S. Kirkbride, M.D., LL.D. Philadelphia: J. B. Lippincott & Co.; 1881.

How to See with the Microscope. By J. Edwards Smith, M.D. Chicago: Duncan Brothers; 1880.

An Elementary Treatise on Practical Chemistry and Qualitative Inorganic Analysis. By Frank Clowes, D. SC. Philadelphia: Henry C. Lea's Son & Co.; 1881.

On the Use of Cold Pack, followed by Massage, in the Treatment of Anæmia. By Mary Putnam Jacobi, M.D., and Victoria A. White, M.D. New York: G. P. Putnam's Sons; 1880.

The Heart and its Function. D. Appleton & Co.; 1881.

Manual of the Physical Diagnosis of Diseases of the Heart. By Arthur Ernest Sansom, M.D. Philadelphia: Presley Blakiston; 1881.

A Guide to the Clinical Examination of Patients and the Diagnosis of Disease. By Richard Hagen, M.D. Boericke & Tafel, New York and Philadelphia; 1881. Translated by G. E. Gramm, M.D.

An Index of Comparative Therapeutics. By Samuel O. L. Potter, M.D Chicago: Duncan Brothers; 1880.

Aids to Diagnosis—Part II; Physical. By J. C. Thorowgood, M.D. New New York: G. P. Putnam's Sons; 1881.

"Doctor, What Shall I Eat?"—A Handbook of Diet in Disease. By C. Gatchell, M.D. Milwaukee; 1880.

A German-English Dictionary of Words and Terms used in Medicine and its Cognate Sciences. By Tancourt Barnes, M.D. Philadelphia: Presley Blakiston; 1881.

The Bacteria. By Dr. Antoine Magnin. Translated by George M. Sternberg, M.D. Boston: Little, Brown & Co.; 1880.

Spectacles, and How to Choose Them. By C. H. Vilas, M.A., M.D. Chicago: Duncan Brothers; 1881.

Aphorisms in Fracture. By Richard O. Cowling, A.M., M.D. Louisville, Ky.: John P. Morton & Co.; 1881.

On "Kerion Celsi;" A Variety of Tinea Tonsurans. By I. E. Atkinson, M.D. Reprinted from the Archives of Dermatology, Vol. VII, No. 1; January, 1881.

Seventh Annual Report of the Superintendent of the Cincinnati Sanitarium for the year ending November 30, 1880.

Erysipelas of the Larynx. By Wm. Porter, A.M., M.D. St. Louis: Re printed from Archives of Laryngology, Vol. I, No. 4, December, 1880.

Higher Education of Medical Men, and its Influence on the Profession and the Public. By F. D. Lente, M.D.

Colorado for Invalids. By S. Edwin Solly. Reprinted from "New Colorado and the Santa Fe Trail," by permission of Harper Bros.; 1880.

A Conspectus of Three Different Forms of Cardiac Trophic Disease. By Roswell Park, M.D. Reprint from the "Southern Clinic."

Proceedings of the Convention of Druggists, and of the First Meeting of the Illinois Pharmaceutical Association, held at Springfield, December 7 and 8, 1880.

Transactions of the Eleventh Annual Session of the Medical Society of Virginia; held in Danville, October 19–21, 1880.

ZYMOTIC DISEASES IN NEW YORK.—Three thousand eight hundred and ninety-four deaths reported in 1880, were referred to zymotic diseases, influenced or aggravated by defective plumbing.

Condensations from Late Editorials in the Medical Press.

THE NATIONAL ASSOCIATION FOR THE PROTECTION OF THE INSANE held a meeting in Boston recently which was notable in many ways. * * One of the topics of discussion, opened by a letter from Dr. Joseph F. Parrish, was that of the etiology and prevention of insanity. Dr. Parrish referred to the fact that insanity arose so largely among a wearied and restless class in whom bodily and mental vigor were sadly disproportionate. He believed that there ought to be more institutions for the treatment of persons who are only on the border-line of insanity, in the "crazy circle" of Crichton-Brown. Dr. H. B. Wilbur, referring to the same subject, expressed his belief that insanity depended on predisposing causes—hereditary, social, and individual—rather than exciting causes. While our civilization increased it, education and study did not, if applied in a proper way. Dr. Nathan Allen said that in his experience ill-health caused more insanity than any other agency. Dr. Allen and Dr. Kenniston, in a subsequent speech, asserted that intemperance was a great cause of insanity, and that any diminution in the former would equally affect the latter. Dr. W. W. Gooding feared that we must accept brain disease as one of the penalties of a higher development, hinting a possible future arrest of a growth of mind aspiring to be god-like.—*Medical Record.*

They seem to overlook the fact that mental disease is often a result of uterine diseases in the female; and that, as Dr. William Hammond asserts, a great many cases of insanity are easily traced to superstition, to disappointed love, and other excesses of passions.

The Abolition of the Office of Coroner.—In attempting to reform the present system it is necessary to take into consideration the abolition of the coroner's jury, the division of the office of coroner into two distinct functions, and the creation of a new system of appointment whereby fitness for the duties will be guaranteed. These are, on their face, reasonable propositions, and are capable of easy fulfillment by the enactment of a suitable law. The passage of such a law could be urged, not only on the ground of general utility, but on the score of economy. It has been proved, time and again, that the verdict of the coroner's jury has no possible bearing upon the subsequent judicial proceedings; in a word, is useless as a judicial measure, gives no security to the accused, is burdensome upon the citizen, and expensive to the State. The coroner, as an officer, is of no importance, qualified neither for medical nor judicial examinations; he is practically a direct incumbrance to the course of justice. All the valuable part of his services is performed by his deputy, who is the medical examiner. The combination of the duties of two offices into one could be made without any possible loss to the State as to actual service, while the salary of the coroner would be saved. Under the Massachusetts law, the saving to the State in criminal proceedings has been one-third with the advantage of the services of skilled experts, and the smooth, prompt working of a perfect judicial process.—*Medical Record.*

The Harvard Medical School, and Reforms in Medical Education.—The annual report of Harvard University for the year 1881 is extremely interesting to those who care to know what progress is being made in elevating our methods of medical education. The medical department of this university is in a prosperous condition, and has great reason to congratulate itself upon the good work that it has done. The whole number of students in attendance during the three terms of the past year averaged two hundred and fifty-one. An appreciation of the advantages of spending the time of study at the college is shown

by the fact that eighty-six per cent. of the graduates in the above year had been in attendance during six collegiate terms. The difference between this condition of things and that in most other medical schools, where two terms is the maximum, is very striking. The plan of introducing preliminary examinations has had an extremely favorable effect upon the *personnel* of the college. Nearly one-half the students have literary or scientific degrees." —*Medical Record.*

The proportion of students who came up for the examination and were rejected was nearly one-third.

THE DECLINE OF THE BIRTH RATE.—Some German Scientists, after a careful investigation into the causes of poverty, misery and crime, have come to the conclusion that an excessively high birth-rate is a frequent cause. This has also been the conclusion of every poor man who has had to rear a large family since the days of Adam. It is wonderful how philosophers revel in highly sounding words facts, which the most ignorant never doubted. Whatever the opposition which the doctrine of evolution may encounter, mankind practically knows that the first and necessary quality of an adult man is to be self-sustaining, and he must be more than that if he marries, for he must now sustain a wife and children; and the number of these he will endeavor to limit according to his powers of sustenance, if not influenced by other motives than those of preservation. John Bascom, in a late work on the Science of Duty, says that only the poor and the improvident think that they have a right to multiply indefinitely. By looking at the subject in another light, I believe, one must come to the conclusion that the strongest plea for public prostitution rests on that same fact: the inability of one to provide for a numerous offspring, or even for a wife. Although it is also a fact that sexual life absorbs a large share of the thoughts and actions of men.

As there is no end to discussions of this character, especially now that we discard empirical views, and refer to the uniform course of nature, what are the practical results to be gathered

from well-known facts? 1. Marriage should be delayed until both contractants are able to provide for themselves and a few children; this is a great conflict with the natural feelings of mankind, for it does away with the most fecund years of the female and induces marriage after the twenty-fifth or thirtieth year. 2. Right or wrong, the prevention of conception has been practically tested in this country as well as in France, and gives results which seem very satisfactory to the parents, but hurtful to the country. 3. A large proportion of mankind being barred from the marriage state, for reasons indicated above and others, claim the right of a natural life, and become the strongest support of prostitution.

The *Medical Record*, in an editorial on the above subject, considers the increased birth-rate as a very small factor in producing distress in Germany, and refers to the expenses of keeping an army of half a million. As to the moral, it says: "The medical profession has, however, always been unanimous in discountenancing the tendency to seek irregular means for limiting the number of the family. * * * * The view that a low per cent. of births is a political necessity does not hold good in this country at any rate."

HIGH MORTALITY IN NEW YORK—THE CAUSES OF IT.—The city has never been in such an unsanitary condition before for such a long period, and has never been afflicted with such a relative mortality. * * * * Although the condition of our streets is, doubtless, the main cause of the malignity of disease and the high rate of mortality, it is not the only one. The drinking-water has been in a bad condition, and has been insufficient in supply. In many parts of the city, for months at a time, the pressure has been so low that water could not be obtained above the first stories of dwelling houses. As a consequence traps became dry, water closets were not flushed, and sewer-gas entered freely into the houses.

Again, the condition of the sewers must not be lost sight of. Aside from being improperly constructed, they have been compelled to find egress for the washings from the miles of gutters

loaded with the rotten refuse of the tenement districts. Of course there is ventilation for the sewers through the houses by means of roof pipes, but it is a question whether the authorities will not now be compelled to get rid of the surplus of noxious gases in some other way.

And still again, it seems proper to take into account the influence of the nuisances of Hunter's Point, of the abattoirs on the east side, of the unsanitary condition of our public schools, and of the crowded state of our tenement districts. All these are factors of greater or less influence upon the mortality of our city, and should be duly estimated in the advocacy of reformatory measures. The streets must be cleaned, but other important matters must also receive attention.—*Medical Record.*

An outbreak of typhus fever has appeared in New York. On March 26th, there were thirty-four cases suffering from the disease in the Riverside Hospital. They were taken from their homes, lodging-houses, and from the German, Charity, Bellevue, St. Francis, and U. S. Marine Hospitals. All, except one from the latter hospital, have been traced to the Shiloh lodging-house, a cheap resort for tramps, which often accommodates five hundred persons nightly. Small-pox has been discovered in the same place, which is now under the care of the sanitary officials.—*Ibid.*

SCARCITY OF DISSECTING MATERIAL.—In one of the metropolitan schools of London but one subject had been received for dissection up to December, while the number of students awaiting material exceeded ninety. The object of the recent "Anatomy Act," was to increase facilities for studying anatomy, but it has signally failed. This state of affairs tallies with our own. Anatomy Acts here, stimulated by an indignant public, are paralyzing good medical training. Officers of public institutions, says the act, *shall* give up unclaimed bodies. There is no penalty incident to violating the act, and thus those officers openly avoid the true intent of the law. Dissection is a *sine qua non.* This fact is indisputable, axiomatic. The State must permit easy access of material. Officers of public institutions, where un-

claimed bodies may lie, must be compelled to *notify* medical colleges, and suffer the peaceable removal of cadavers. Such action could not offend public morals, and must increase the facilities for medical teaching.

In Maine, a medical degree cannot be obtained without the doctor violating law; for he must dissect to fulfill the conditions of the degree, and a cadaver cannot legally be secured. Such absurdities are humiliating. The recent Ohio legislation has not been much better; but we hope the present legislature will take some sensible action in this very important matter.—*The Ohio Medical Recorder.*

CREMATION.—"At present Germany and Italy are the only European countries where incineration of the dead is really practiced. It is far more popular in the latter country than in the former, and Milan is now the chief cremating center. During the past four years over seventy bodies have been burned in the furnace in that city. There have been ten or fifteen cremations at Lodi, and a larger number at Gotha. The number is greater, however, each succeeding year, and there is every sign of a growing popularity of the practice. In England the sentiment of many of the very best men is either in its favor or not against it. The graveyards are a bane to England, and in some places another mode of disposing of the dead is almost a necessity. The Earl of Beaconsfield, the Bishop of Manchester, and others have spoken loudly upon the danger to health of the English churchyards. Since last summer quite a strong feeling in favor of cremation has shown itself among medical men. The total cost of a cremation at Milan is nearly ten dollars. To this must be added the cost of bringing the body to the crematorium.

"We have, before this, expressed our opinion in regard to the practice of cremation. From a sanitary point of view it is to be highly commended, and is, indeed, in some places, particularly in the crowded cities of the Old World, almost a necessity. The objections to it are made on æsthetic, on economic, and on medico-legal grounds. Regarding the first, none have successfully refuted the argument that it is only prejudice which makes the

practice seem revolting or irreligious. It is claimed that cremation may destroy evidence in criminal cases. And it is certain that there will have to be special legal regulations of the practice. It is probable that after all cremation will succeed or fail, according as it does or does not afford a means of disposing of the dead more cheaply and decently than by burial. If cremations are expensive, and crematories offensive, they will not become popular, even though graveyards are unwholesome. The principles of economic science live after us. As far as experience goes now, it seems likely that cremations in large cities can be done cheaply. And here the sanitary value of the practice is most apparent. We shall watch with interest the work and progress of the New York Cremation Society."—*Medical Record.*

BELLEVUE HOSPITAL MEDICAL COLLEGE.—The faculty of this well-known college has returned to the two-years course of study. Only fifty new students were registered since last fall. This is not so good a result as Harvard's, quoted in this article. Perhaps we might consider the Medical Colleges as affording only preliminary training. The majority of practitioners attend post-graduate courses, study in hospitals, or abroad, or practice a few years with their preceptors, and very few pretend to refer their success in practice to the few data committed to memory during two medical courses. The advantages of lectures are always limited, and it is a question if more repetition would be followed by better results.

SMALL-POX HOSPITALS IN LONDON.—This caused some agitation in the London press and the House of Lords a short time ago. Vaccination in the metropolis has not been received with more favor than in Chicago, although the belief in its efficacy is deeply rooted in the medical profession of London. It is even asserted by the *British Medical Journal* that, as statistics regarding the attendants and nurses of small-pox hospitals show, persons efficiently vaccinated and re-vaccinated may live with impunity in the company of the variolous. But it seems that the non-

acceptance of such views by the people at large is the cause that small-pox remains endemic and necessitates special hospitals, These are not without danger in a city like London, but it is acknowledged that ambulances are a more common source of risk, and should be so constructed as to be readily recognized.

"So long as vaccination remains in its present unsatisfactory condition, small-pox hospitals will be necessary; and we are of opinion that these hospitals may be so conducted as to be harmless to the neighborhoods in which they may be placed.—*The British Medical Journal, March* 12.

PROPOSED ROYAL SOCIETY OF MEDICINE IN ENGLAND.—The important question which Mr. Erichsen revived in the interesting address with which he concluded his prosperous and dignified presidency of the Royal Medical and Chirurgical Society, is one on which, we believe, a large preponderance of opinion will be found to support the conclusions to which his experience has conducted him. The advantages of the scheme are so palpable, that it might hardly seem necessary to set them forth. The great object of those who urge the amalgamation of the Royal Medical and Chirurgical, Pathological, and Clinical, and others, into a single society, is to prevent the waste of material and the overlapping which is so strongly felt under the present system; to render the new institution grander and more commensurate with the dignity and the increasing public importance of the science of medicine; more ready and more fit to assist the government and the public, on occasions of emergency, with counsel and assistance such as can hardly be obtained at present even from the colleges, and certainly from no other institution. Along with this it is believed that such an amalgamation will place the new Royal Society of Medicine on a firmer financial basis, and render its continuance more secure than can be said to be the case with the present societies—even the oldest and most dignified of them. The scheme was so near success in 1870 that it is almost difficult now to see why it was dropped. If it be heartily advocated and properly worked out now, we do not see why it should not be soon realized."—*Ibid.*

SWEATING DISEASE.—In July, 1880, an epidemic of sweating disease (*suette miliaire*) of which we know very little in this country, carried away 142 victims among 1,000 cases attacked, in a population of 20,000 at Oleron. This is an island off the coast of France in Biscay Bay. The same disease raged 31 years ago in three departments, and was scientifically investigated. It has been endemic since in various localities. It is an infectious disease, but it is doubtful if it be caught directly from one person by another; it is more probable that it is communicated in the manner of Asiatic cholera. In 15 days the whole island had been invaded. Symptoms: An abrupt start, rapid evolution, profuse perspiration, a peculiar eruption, pain in the epigastrium, distress in breathing, often giving rise to a sense of suffocation, constipation and loss of sleep, fever and delirium. Death may supervene in 12 hours. Six hours after death the cadaver exhales a horrible stench, and a fetid blood sometimes runs out of the nostrils and mouth. This seems the origin of the contagium; and as in Oleron the coffins are carried to the churchyards on men's shoulders, this might also partly explain the rapid spread of the epidemic. The temperature has ranged from 40° to 43° C., in grave cases (104° to 107° F.). Treatment: Ipecacuanha in scruple doses, 1 gr. 5, once in 24 hours, seemed very useful. Quinine is said to have failed in reducing the temperature. Cold packs were efficient; they encourage the eruption.—*Communication of Dr. Jules Rochard to the Académie, at its séance of March* 1, 1881.

BACTERIA AND FRENCH ENTHUSIASM.—The JOURNAL AND EXAMINER has given to its numerous subscribers, in November and February, faithful translations of some valuable experiments with bacteria in France. The subject has now created so much enthusiasm in that country, that we could not form an idea of it here, were it not for the injury done to American trade by the edict prohibiting the importation of American pork in France. We know that the edict followed the discovery of the *trichina spiralis* in some hams imported from America, although no epidemic, nor even individual deaths had been recorded. Some

members of the Académie de Médecine have forgotten their dignity and quarreled over the experiments; and discoveries have been announced and echoed from the boundaries of the country before they had even been made.

However, there is something worthy the admiration of the scientific world in the fact that in the laboratories of the Parisian Normal School such mortal viruses as those of hydrophobia, of anthrax, and of septicæmia are daily manipulated by experimenters. The capital invested in these researches also deserves some attention. The state had to become interested in them to some degree before it would put at the disposition of experimenters the flocks of sheep of the ex-imperial farm at Vincennes, and those of the school of Alford. Some investigators were sent to Auvergne, Beauce, and even to Algeria by the State, and military veterinary surgeons were enjoined to assist them. The opposition so far has been vigorous enough to test, and thereby render more brilliant, the results which amount to this:

M. Semmer, of Dorpat, experimenting with due regard to the conditions advocated by Pasteur, has succeeded in vaccinating rabbits for septicæmia. M. Toussaint vaccinated sheep successfully for anthrax, and obtained the wonderful result of an hereditary immunity from that disease in the young. A short time ago, two veterinary professors of Lyons having vaccinated successfully for a form of anthrax in a locality where the disease is endemic, a cattle insurance company had 250 cattle of the bovine species vaccinated with the vibriones of the anthrax virus. Although these facts are not numerous yet, and involved in some obscurity, although they may not be so practical as they appear to such men as Pasteur and Toussaint, yet they are certainly interesting, and it is a pity that, with the vast resources afforded by the government, state boards of health, and especially by private fortunes here, they are so little investigated.

Selections.

THE PHYSICIAN'S LEISURE; A PLEA FOR THE STUDY OF ARCHÆOLOGY.* By Dr. CHEVERS.

Gentlemen:—When an old physician is asked by a young one, or by a student of medicine, to advise him with regard to his course in life, as you have requested me, one of the soundest, yet perhaps not the most courtly or most original, pieces of good counsel that he can offer is—"*Mind your business!*" Still, this monition would be very imperfect, nay, almost useless, if allowed to stand alone without its proper and natural adjunct, "*Allow yourself a small, but fair, complement of leisure, and occupy that leisure to the best possible advantage.*"

In a long experience, I have known several medical men who had no occupation except the practice of their profession. Most of these were deservedly successful workers; and so far, you will say, they did wisely and well. Still, I noticed that those intervals of business, which must and ought to occur rather frequently in the life of every active man, appeared to be scarcely employed with advantage by them. They could not read, they were not artists or chess-players. They smoked or chatted, or played billiards—which no gentleman in India, or, let us trust, elsewhere, ever does in a public room. And thus they obtained both mental and physical rest; but that rest was certainly not of a high or intellectual order. As a means of recuperating the tired mind it could hardly be regarded as more valid than sleep. Had

* This address was written about two years ago, at the request of the author's friends, the pupils of a medical school, with a view to its being read at their physical society. This intention was not carried out; and it now appears that the opening of a session is a proper occasion for bringing the subject forward.

they taken long walks or rides, I should have thought that they occupied their leisure better. Still, it has always appeared to me that, except it be taken *with an object*, a ride or walk is a simply tiresome proceeding. The medical man who delights in such exercise ought to be a botanist, an entomologist, a geologist, or an antiquary; or he ought, at least, to follow the hounds, or the trout, or the partridges.

Again, the physician who is most devoted to his profession must occasionally have other and longer intervals of rest forced upon him. He falls ill; or, having made his fortune, he retires. Where, under these circumstances, is his intellectual life? What charming prospect of well-earned and long-desired healthy mental and physical recreation lies before him? His mind has been trained to work only in a single deep but narrow groove, and now the way of its advance is actually barred. You will say he may, even in permanent retirement, continue to be a student in his profession; there is always plenty to learn in medicine as the science makes progress. No! That track is closed against him. The more a practitioner has loved the cultivation of his profession, for its own sake, in active life, the less he cares to study it in retirement unless he be himself a writer. To watch passively the stately onward march of that science of which he has ceased to be a leader and a master, and to sit idly watching the daily race in which he, yesterday, an athlete, is now paralyzed as far as active competition and valid advance are concerned, produces in his mind a sense of natural, though confessedly selfish, pain. He says, "I am left behind; I am forgotten!" or, in a nobler frame of mind, he sighs regretfully, and uses the words which a poet has given to Joan of Arc in prison—

"I am God's broken sword!"

"It is no longer granted to me to administer the noble and saving power with which I was entrusted by my Maker; the great object of my life has been snatched from my grasp; I am blind, or a cripple, or an aged man, and now my existence affords me no prospect of rational pleasure!" It may certainly be argued, the man whom you pictured just now is not, in the first place, a very highly cultured, intellectual being, and you imagine for him

regrets which he is scarcely capable of entertaining;—dominoes remain perfectly open to him, or he will probably be well satisfied to decline into "an old age of cards." Still we must remember that the majority of ourselves are only average people; and I think it incumbent upon each of us to consider how that rest and leisure which are so needful, and so exquisitely welcome and delightful to the majority of working men, can be prevented from becoming to us a mere shunting into some Sleepy Hollow, in the fruition of which the very hybernating animals are our superiors.

Some of you may then inquire of me—How am I to elect the best means of employing my leisure? To this I must reply—Nature will often teach you this. From your earliest youth you have possessed an ear for music, or a tendency to draw upon your slate, or a love for healthy field sports and the best pleasures of a country life. Thus constituted, you are fortunate men, and there is nothing in the profession of medicine that refuses to allow you to devote much of your leisure to music, drawing, hunting, shooting, cricketing, or boating. Or, happily, you may start in life with natural gifts which are, to the physician (drawing being excepted), far more appropriate than these. You may be endowed with a mechanical gift, or you may feel a keen interest in all that relates to the lower animals, or you may so love reading that scarcely any book fails to interest you. It was by the cultivation of such natural instinctive tendencies as these that William Fergusson, John Hunter, and James Copland did so much towards rendering our science illustrious. If he had the making of his own mind, every medical man ought to become either a zoologist, a geologist, a botanist, a chemist, a draughtsman, or a scientific mechanician; and should, in the pursuit of one of these collateral sciences, find ample occupation for his leisure. But, certainly most fortunately, we are not all self-made; a natural, inborn taste, however excellent, cannot be forced upon us; and not a few of us must confess, with regret, that there are, among the beautiful sciences collateral to medicine, more than one the full acquisition of which is practically impossible to us. Still, we must all, if we wish to pass the dawn and the evening of our active lives pleasantly as well as success-

fully, look around us for some soft and smooth pillow upon which the aching brow and the overtasked mind can seek repose and recover working energy.

A very sad fate, not at all well understood by the public, and hardly enough recognized by the profession, not unfrequently falls upon a man of the grandest intellect. In his case old age advances, and with it reputation suddenly rises to its highest point, and work comes in with almost overwhelming pressure. In that once admirably organized mind and body senile changes have set in, decay has commenced, the heart is somewhat weakened, the cerebral arteries are becoming narrow and rigid: but the artist's picture must be finished for the exhibition of the 1st of May; the physician's visiting-list is so overwhelmingly full of appointments that he almost sobs as he shuts his diary, knowing that, immediately he declares himself unequal to work, practice will leave him; the writer of brilliant leaders is irrevocably pledged to insert so many columns, and not one less, on the most intricate question of the day, in to-morrow's journal; the judge finds himself within twenty hours of the task of summing up in his court the evidence which has occupied the attention of a jury and of all Europe for many weeks. All these are met by one Satanic prescription. The Tempter whispers, "Drink port wine, my learned or artistic friend, as did more than one great painter whose history is too recent and too sad to need further mention, and as Lord Stowell did; try gin-and-water, used-up essayist, as Lord Byron did, and find in it immediate inspiration!" And, fatally, so it is. The trembling hand is steadied, and throws upon the canvas a glow such as Nature rarely sheds over sky and sea and wold; for three hours to-morrow the aged voice will ring clearly down from the seat of judgment in broadly decisive arguments which will stand in the law reports, as irrevocable judgments, for a century to come; and thus, for a few more months or years, the sad, evil, and shameful succession, the *facile descensus*, will be—stimulation, effort, collapse, and then stimulation again, until apoplexy, delirium, or suicide closes the miserable and most unfair struggle. And then the world will say—"He was a man of genius; but, latterly at least, a wretched sot!" We may trust that He who made and endowed him, who

raised him into a position to which very few but a Gull, a Cockburn, or a Beaconsfield are fully equal, and who knows how fallible he was and how sorely tried, will award him a juster verdict. What now ought either of these unhappy men to have done to escape the threatened fate? Should he not have retired from business before the beginning of the end set in, occupying, as James Blundell and William Macready did, and as James Annesley and Edward Waring and several other Indian physicians have done, a long retirement in literary leisure? Failing the means to do this, should he not, like Sir Henry Holland, be content with moderate success and wealth, and devote a portion of each year to foreign travel, the best of all rests and tonics to a worn brain and a feeble digestion? Or, with less time to spare, ought he not to seek a more vigorous life (or, it may be, find death, as they found it) in the saddle, as Samuel Wilberforce did, or as John Liston did, in his yacht on the Thames? Or, allowing himself still fewer spare moments, might he not follow the example of Richard Bright or Francis Sibson, and spend some of his evenings in delightful contemplation of his folios of early German engravings or his cabinets of Wedgwood ware?

These latter allusions lead me to the proposition that he who rest his mind by judiciously employing his leisure as a collector often finds that he can work more steadily and better and farther on in life than many of his neighbors do. The "collector," of sound principles and well-balanced mind, leaves his work as gaily and as hopefully as the boy leaves his school-house, and returns to it again bright, active, and refreshed. In pursuing his collection, there is no part of the town or of the country to which he does not penetrate, full of thought and of pleasant inquiry and interest. Whether he is in search of a rare postage stamp, or a dog's-eared little Elzevir, or a plant which has taken up its habitat in some almost inaccessible spot; or whether, like Joe Grimaldi, he starts after the pantomime is over and walks nineteen miles to Dartford that he may be in time to catch a Camberwell Beauty in the early morning, his mind is never in want of a desirable and exhilarating object of pursuit, while his body is refreshed by the most invigorating exercise.

I can scarcely imagine a drier-mannered and more reticent

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little old philosopher, or one who, in his public life, gave one the idea of being less capable of amusing himself, than Richard Bright, the expositor of Morbus Brightii, was. I was lately surprised to learn, from a leading print-seller, that, often as late as twelve o'clock at night, Dr. Bright would knock him up and say, "Now, Mr. Faussett, let me see those engravings. I have not had a minute to spare all day long!" He was a diligent and judicious print-collector.

But the maxim that the active collector is generally a bright and indefatigable worker, is worse than useless without the correction that *he must not allow his passion for collecting to encroach either upon his business or his means.* As a general rule, a not very rich but conscientious collector is, in all his affairs, collecting, classifying, and assorting, in his business and in his household, a man of order and method; and, if it be only to find the means of collecting, he is usually industrious, economical, and moderate in all things. But collecting may become an engrossing, overpowering passion, and passion is only one remove in kinship from vice. Some years ago, an English nobleman resolved that he possessed taste, and became a collector. Now, when a well-to-do Duke determines that his collection of pictures, or of statuary, or of gold medals, or of antique gems, or his conservatories, shall be the finest in the world, he encounters a very stiff but not quite impracticable task; but, unhappily, this magnate attempted all these collections at once, and, very naturally, discovered, rather early in his career, that his magnificent revenues were seriously compromised.

The collection of medal portraits in the library of our College of Surgeons was made by a banker, Henry Fauntleroy (who, after he was hanged, was unkindly called Corduroy). But, although a man of taste, this individual was self-indulgent and cruel as a Sybarite. His passion for collecting and other less happy proclivities brought his career to the consummation which I have indicated; but, as Sir Joseph Fayer has shown that every venomous Indian serpent has a harmless snake which closely resembles it, so every virtue has its corresponding vice.

These remarks will prepare you to receive the proposition that a love for Archæology is calculated to afford a delightful solace

to the hard-working medical man. Several of you may be so considerate as to take up this proposition for the moment, and to inquire—How am I to become an antiquary?

I will at once put your question to a crucial test. In amusing yourself in your garden, would you rather find a spade-guinea of last century or a lar of Mars? Or rather, in estimating one object against the other, would you value the coin because it is an object of a certain intrinsic value and a pretty appendage to the watch-chain, and despise the other because it is a not very artistic little image of ugly bronze, not intrinsically worth its weight in copper, with the erugo thick upon it? If so, you have not a spice of true antiquarian enthusiasm, and I can only beg you to endure me as I proceed, but never to attempt to learn to become that for which the natural bent of your mind has not fitted you. I conscientiously believe that, whenever a medical man can take kindly to the study of antiquities,—it need not, to be useful to the individual, go beyond mere dilettantism,—it will not only afford him life-long pleasure, but will, properly directed, validly aid him in the study of his profession. It is a mere platitude to declare that a physician who knows nothing of the history of medicine, is as ignorant and narrow-minded a professor as is the statesman who is unacquainted with the political history of his country. The history of every branch of the profession which you and I have happily embraced is full of interesting and valuable teaching; for it must be remembered that our predecessors, although imperfectly grounded in physiology and pathology, and by no means free from credulity and superstition, were often acute, cultivated, observant, and deeply reflecting men, who frequently obtained glimpses of great truths which, having been imperfectly perceived, lapsed into oblivion for centuries. Take a few points, out of hundreds, in several branches of our science. Thus, in Surgery, English surgeons, a hundred years ago, had no specula; the Pompeian surgeons had. Peter Lowe, surgeon to Henry the Fourth of France, taught that the proper treatment in strangulated and incarcerated hernia is puncture; which has, of late, been used with some advantage in cases of intestinal obstruction.

[TO BE CONCLUDED.]

Obituary.

IN MEMORY OF DR. M. O. HEYDOCK.—Resolutions offered at the meeting of the Chicago Medical Society, April 18, 1881, by the committee appointed at that meeting, relative to the death of Dr. M. O. Heydock:

Resolved, That in the death of Mills Olcott Heydock, M.D., on the morning of the 17th inst., after a brief and severe illness, this Society has lost one of its most esteemed members, the profession one of its most enlightened and useful practitioners, and society a most valuable citizen.

Resolved, That we deeply sympathize with the widow and relatives in their severe affliction, and commend them for consolation to the great Giver of all good, who alone can heal the wounded spirit.

N. S. DAVIS,
WM. E. CLARKE,
R. G. BOGUE.

Per L. H. MONTGOMERY, *Secretary*.

EULOGIUM BY DR. JOHN BARTLETT.—*Mr. President:* It is a painful occasion to us all to-night, when are to be uttered the last kindly words in remembrance of our late fellow, Dr. Heydock. It is an occasion especially sad to those of us, who by concurrence of age, and period of residence here, have the more intimately associated with him who has so suddenly been called hence.

Mr. President, while words of sorrow at the departure of a loved friend are so faintly expressive of one's feeling as almost to

prepare the silence which grief invites, yet as the stricken heart of man can but seek relief in utterance, something needs be said ere the name of M. O. Heydock fades from our lists. To a natural adaptation for his profession, Dr. Heydock brought the advantage of a superior intellect, well trained by the mental athletics incident to the acquirement of a collegiate education. To these qualities were superadded in Dr. Heydock a genial disposition, coupled with an urbanity and pleasing dignity of manner, which ever made his presence welcome. Mr. President, I have known our departed friend for twenty years, and I have ever known him as an earnest, methodical student, a painstaking, conscientious practitioner, and an honorable colleague. He was all that is implied in these words, "A scientific physician and a Christian gentlemen."

Bereft of the presence of our associate, we have yet remaining the pleasant assurance that so long as memory endures, we can never forget the example he has set for us, of faithful work and honorable conduct.

DR. ISAAC RAY, well and widely known as a writer on the treatment of insane patients, died March 31, at his residence in this city, in the 74th year of his age. He was born in Beverly, Maine, and graduated at Bowdoin College in 1827, and studied medicine with Dr. Shattuck, in Boston. He practiced for some time in Portland and Eastport, and then took charge of the Insane Asylum at Augusta. Subsequently he was in charge of the Butler Hospital at Providence, and came to Philadelphia in 1867, since which time he has been engaged as a consulting physician. In July, 1880, he was elected an honorary member of the Medico-Psychological Association of London, and received the diploma a few weeks since. He had been in ill health for twenty-five years previous to his death. He was elected a fellow of the College of Physicians of Philadelphia in 1868.

Dr. Ray was a voluminous writer on medical subjects, and included in his works will be found: "Conversations on Animal Economy," 1829; a treatise on the "Medical Jurisprudence of Insanity," 1838, a work termed by Mr. Cockburn, Attorney-

General of England, as "perhaps the most scientific treatise that the age had produced on the subject of insanity in relation to jurisprudence;" "Homicide—Epilepsy," 1867, a review of the case of G. W. Winnemore, executed for murder at Philadelphia, August 29, 1867. He also contributed papers to the *North American Review*, *American Quarterly Review*, *Christian Examiner*, *American Jurist*, *Law Reporter*, *Boston Medical Magazine*, *American Journal of Insanity*, and the *Atlantic Monthly*. The eleventh edition of his "Medical Jurisprudence" was published in this city in 1860.—*Philadelphia Medical and Surgical Reporter.*

OBITUARY.—Died at Washington, on the 23d of February, aged fifty years, George Alexander Otis, M.D., Surgeon U. S. A. Dr. Otis, who is widely known as an eminent writer on military surgery, and as the compiler of the surgical volumes of the Medical and Surgical History of the War, was born at Boston, Massachusetts, November 12, 1830; he graduated in the Arts at Princeton College, and in Medicine at the University of Pennsylvania, in 1850. He then visited Europe and prosecuted his studies in London and Paris, and, returning to this country, he began the practice of his profession at Springfield, Massachusetts. He entered the army as surgeon of the 27th Massachusetts' Volunteers, in September, 1861, and after the close of the war, he entered the medical corps of the regular army.—*Medical News*, April.

Items.

THE ILLINOIS STATE MEDICAL SOCIETY.—The thirty-first annual meeting of the Illinois State Medical Society will be held in Chicago, in the hall of the Methodist Church Block, beginning at 10 a. m., on Tuesday, May 17.

The officers for the year are:

President, Geo. Wheeler Jones, M.D., Danville; First Vice-President, Wm. Hill, M.D., Bloomington; Second Vice-President, G. W. Nesbitt, M.D., Sycamore; Treasurer, J. H. Hollister, M.D., Chicago; Permanent Secretary, S. J. Jones, M.D., Chicago; Assistant Secretary, W. T. Montgomery, M.D., Chicago.

Committee of Arrangements: Dr. J. N. Hyde, Chairman, Chicago; Drs. N. Bridge, R. Park, E. F. Ingals, P. S. Hayes, Chicago.

The Standing Committees that are expected to report are—

Committee on Practical Medicine: E. P. Cook, Mendota; W. West, Belleville; G. W. Nesbitt, Sycamore.

Committee on Surgery: Chas. T. Parkes, Chicago; Wm. A. Byrd, Quincy; D. S. Booth, Sparta.

Committee on Obstetrics: H. Webster Jones, Chicago; W. S. Caldwell, Freeport; C. T. Reber, Shelbyville.

Committee on Gynæcology: J. W. Dora, Mattoon; Ellen A. Ingersoll, Canton; B. F. Crummer, Warren.

Committee on Ophthalmology and Otology: F. C. Hotz, Chicago; J. P. Johnson, Peoria.

Committee on Drugs and Medicines: Frank H. Davis, Chicago; W. C. Pipino, Quincy; W. G. Cochran, Farmer City.

Committee on Necrology: T. F. Worrell, Bloomington; G. W. Albin, Neoga; E. Ingals, Chicago.

Committee on State Register: E. P. Cook, Mendota; F. L. Matthews, Springfield; D. S. Booth, Sparta.

The Special Committees appointed to report are—

Dermatology and Syphilis: W. J. Maynard, Chicago.

Laryngeal Tumors: E. F. Ingals, Chicago.

Abnormal Thermal Conditions in Diseases and the Means of Controlling them: J. H. Hollister, Chicago.

Results in Fractures: C. C. Hunt, Dixon.

Volunteer papers will be presented by—

1. Permanent Removal of Hair by Electrolysis: By Plym. S. Hayes, M.D., of Chicago.

2. On the Present Status of Specialism in Medicine: By A. Reeves Jackson, M.D., of Chicago.

3. On the Surgical Anatomy of the Sheaths of the Tendons in the Palm of the Hand: By Roswell Park, M.D., of Chicago.

4. On Ringworm of the Scalp: By Wm. J. Maynard, M.D., of Chicago.

CHICAGO MEDICAL COLLEGE (MEDICAL DEPARTMENT OF THE NORTHWESTERN UNIVERSITY).—The annual commencement exercises of this institution were held on Tuesday, March 29, 1881, in Central Music Hall, Prof. Davis, Dean of the Faculty, presiding. The candidates for graduation occupied the front seats of the auditorium; next were the undergraduates of the medical classes, with many members of the classes in the College of Law and the College of Liberal Arts, while the rest of the large hall was crowded with citizens. On the platform, the Dean was accompanied by his colleagues of the medical faculty; Oliver Marcy, LL.D., Acting President of the University, most of the professors in the Colleges of Law and of Liberal Arts, and members of the Executive Committee of the Board of Trustees.

The exercises were opened with prayer by Prof. F. W. Fisk, of Chicago. Prof. W. E. Quine, Secretary of the Faculty, then read his report, which stated that the twenty-second annual session of the college had been characterized by a degree of success in every department, which had been gratifying to the faculty and creditable to the students. During the session of twenty-six weeks, or six full months, clinical instruction had

been given daily to full classes in the Mercy Hospital and College, and to small classes for individual training in the dispensary, and practical lessons in anatomy, chemistry, and microscopy in the several laboratories, which, with the didactic lectures and demonstrations in the several branches, make an aggregate of 2,688 lessons and lectures of one hour each. The amount and variety of instruction thus given, both practical and scientific, and its methodical arrangement, were claimed to be equal, if not superior, to that given in any other medical college in this country. The supply of anatomical material and other means of illustration had been ample, and the clinical resources more than could be utilized. Forty-one advanced students had received special certificates for satisfactory service in surgical dressing, and twenty-seven students received certificates for service as clinical assistants in the dispensary. The whole number of persons entered upon the college register and receiving instruction during the college year was 191. At the commencement of the present college year, as in each of the preceding years since the autumn of 1876, several of those who applied for admission were refused from inability to comply with the requirements in regard to general education. In the regular examinations of classes, twenty per cent. of the freshmen, or first year students, failed to reach the junior or second year class; and twenty per cent. of the juniors failed to qualify fully for entering the senior class. Some of these will make up their deficiencies during the summer vacation and retain their class standing, but about thirty per cent. of the whole number fail to obtain the desired diploma. According to this report, the medical faculty of the university aims to pay strict attention to the *proficiency* of its graduates rather than to their number. The Dean, Prof. N. S. Davis, then conferred the degree of Doctor of Medicine upon those members of the senior class who had been recommended by the faculty for that purpose, accompanying the delivery of the diplomas by a brief and impressive charge concerning the nature of the duties and responsibilities they were about to assume.

E. W. Andrews, of the graduating class, responded in a feeling manner, alluding to the close association that existed between professor and student in the pursuit of medical knowledge, and

paying a regretful farewell to the dean and faculty in behalf of the class.

The following is the list of graduates:

E. W. Andrews, J. H. Bacon, R. T. Bailey, A. E. Baldwin, J. H. Bates, E. D. Bergeron, Frank Billings, A. T. Blackburn, G. C. Blish, A. H. Burr, C. E. Cook, W. G. Cook, D. C. Davies, W. L. Dayton, J. O. Everett, M. L. Felkner, J. A. Fordyce, W. S. Gates, D. A. Hadley, H. B. Hemenway, B. U. Jacob, F. S. Johnson, J. L. Williamson, E. A. Kegley, A. T. King, W. J. Latta, P. A. Letourneau, Richard Melms, F. T. Nye, A. E. Okey, J. L. Priestman, M. Z. Putnam, E. B. Righter, George Rivard, H. O. Rockwell, J. F. Rood, Fernando Roys, J. D. Simpson, F. A. Snyder, Heman Spaulding, J. H. Stowell, D. H. Sullivan, De W. Townsend, O. M. Vaughan, M. H. West.

Dr. H. A. Kelso received an honorary degree.

Dr. E. C. Helm, Dr. J. J. Larkin, and Dr. L. T. Potter, received special diplomas for one year each of post graduate service in the hospital.

Prizes were conferred for the best thesis, on J. L. Williamson, of Milwaukee, and H. B. Hemenway. The anatomical prizes were received by W. Porter and G. A. Wells, Prof. Rea making the presentation with a humorous and poetical speech. The Dr. Edwards prize was taken by W. E. Morgan, and that of Dr. Senn, of Milwaukee, by A. M. Vail, of Kansas. J. H. Bates also received a prize offered by Prof. Jenks for the best essay on a gynæcological subject. The chemistry prizes were awarded to W. A. Mann, M. D. Burbank and G. B. Eaton.

The valedictory address was delivered by Dr. Hollister, who spoke of the inherent feebleness of man, but he was possessed of perception, reason and judgment, which were perpetual food for thought. The experience of 6,000 years told of the mountains that were in the path of knowledge. He spoke of the achievements of medical science in the last century as being greater than ever before in the world's history. A medical knowledge could not be measured to-day by that of twenty-years ago; it now demands preliminary education and great culture. The Chicago Medical College had been organized to test the graded

system, and its success proved the efficiency of the new plan. Seven of its professors were its own graduates, and the institution was out of debt. He then spoke of the fact that other colleges were adopting the graded system, and read letters from China and Japan, which said the American system had been adopted in distant lands with official sanction. Applications for admission here had been received from Russia and Australia. He congratulated the graduating class, for the Faculty, and trusted they would take up their life-work, and always acquit themselves like men.

The exercises were interspersed with music, and the young men of the graduating class received many beautiful floral tributes.

The fifteenth annual reunion and banquet of the Alumni Association of the College was held Tuesday evening, March 29, at the Tremont house. The graduates, including the class whose graduating exercises were held during the afternoon, gathered to the number of about 150 in the club-rooms, where a preliminary reunion and business meeting was held. An address of welcome was delivered by Dr. R. Park, in which he stated that a departure had been made from previous years, as the banquet was this year tendered by the Faculty to the Alumni.

Dr. F. E. Waxham read the necrological report, and the President, Dr. W. E. Quine, read his annual address. The election of officers resulted, on the report of a committee on nominations, as follows: President, D. A. K. Steele, '73; Vice-Presidents, Frank Kimball, '80, and Frank Billings, '81; Secretary and Treasurer, C. W. Earle, '70; Necrologist, F. E. Waxham, '78. Letters were read from absentees, and a social reunion followed. At about 10 o'clock the old and young doctors adjourned to the dining hall, where an excellent dinner was served. After the dinner had been discussed at length the speaking began, the prescribed toasts being as follows: "Welcome," responded to by Prof. N. S. Davis; "The Old Boy," Dr. J. E. Link, of '62; "Reminiscences of a 10-year-old Graduate," C. W. Earle, of '70; "The Badger as a Practitioner," Clark Gapen, of '75; "The Last Cathartic," J. A.

Fordyce, of '81. The responses were full of medical witticisms, and were followed by impromptu toasts, responses, songs and anecdotes, which occupied the time until an early hour in the morning.

THE TREATMENT OF PYROSIS OR WATER BRASH.—M. Ory gives, in *La France Médicale*, the following formulæ, which may be usefully prescribed to complete the rational treatment by proper regimen, milk and vegetable diet, and alkaline drinks.

Jeannel advises a tablespoonful, from two to four times a day, of the following mixture:

℞. Rhei pulv .....ʒ iiss
Sodii bicarbonat.....gr. xxx
Syrupi.....fʒ iiss
Aquæ menthæ viridis.....fʒ viiss. M.

Each tablespoonful represents about seven and a half grains of rhubarb.

In the Pharmaceutical Formulary of London is the following mixture of chalk:

℞. Cretæ præparatæ,
Sacchari albi.....each ʒ ss
Acaciæ pulv.....ʒ ij. M.

Or the compound chalk powder—

℞. Cretæ præparatæ.....ʒ iij
Canellæ pulv.....ʒ ij.
Tormentill. radicis pulv.,
Acaciæ pulv .....each ʒ iss
Piperis longi pulv.....gr. xv. M.
Dose, fifteen to thirty grains.

This powder, according to Bouchut, is also of service in cases of chronic diarrhœa.

The following powder has also been prescribed with success:

℞. Magnesiæ,
Sacchari pulv.....each ʒ ij
Bismuthi subnitrat.....gr xv
Sodii bicarbonat.....gr.xxv. M.
Divid. in chart. x.
Take one powder at the beginning of each of the two principal meals.

Franck has advised the following:

℞. Magnesii carbonat.....gr.xxx
Rhei pulv.,
Canellæ pulv.....each gr.viiss. M.
Take in two doses.

M. Ory also recalls the composition of Warner's Cordial Liquor:

℞. Rhei pulv..... ....ʒ iss
Sennæ pulv..... .....ʒ j
Croci pulv..... .....gr xv
Glycyrrhiz. pulv..... .....ʒ j
Uvar. passar .....ʒ iij
Alcoholis (21°) .....f.ʒ xij. M.
Digest for fifteen days and filter.
Administer a teaspoonful morning and evening, a short time before each meal.

M. Bouchardat suggests the following in the treatment of this affection:

℞. Rhei pulv.,
Magnes. calcinat. pulv.....each gr.xxv
Opii pulv..... .....gr.ss.
Divid. in chart. v.
Dose, one each day, before the principal meal.

STATISTICS OF MEDICAL JOURNALS.—On the authority of Mr. Durean, one of the librarians of the Académie de Médecine, the present number of medical periodicals for France and its colonies is one hundred and forty-seven, ninety-five of these being published in Paris, and fifty-two in the departments. The German empire publishes one hundred and thirty-three journals, Great Britain and Ireland sixty-nine, Austria fifty-four, Italy fifty-one, Belgium twenty-eight, Spain twenty-six, Russia twenty-six, Holland sixteen, Switzerland ten, Sweden and Norway nine, Denmark five, Portugal four, the Danish Principalities four, Turkey two, Greece one; the total for Europe being five hundred and eighty-three. In America there are one hundred and eighty-three journals, in Asia fifteen, in Oceanica four; the total for the various continents being seven hundred and eighty-five. The number of medical journals created since 1679 exceeds two thousand, five hundred.—*Lyon Médical.*

WONDERFUL MATERNAL IMPRESSION, IF TRUE.—Dr. Frank M. Ramsey, of Knoxville, Tennessee, writes to the Nashville *Journal of Medicine and Surgery*, April, 1881:

"Maternal impression once admitted, as I think it should be if records are properly made, I believe the fact will be established that at any period during gestation a mother may be impressed so as to leave an evidence on the embryo or fœtus.

"A negro woman, belonging to my own household, was in the seventh, perhaps eighth month of gestation, when she was thrown from a horse and fell in soft mud, except one leg in its lower third, across a hay-rod, or sapling used to bind hay on a wagon. Twenty-four hours afterward she aborted. The child had a well-defined ecchymosis on its leg, corresponding with the leg of the mother which struck the hay-rod, and the leg of the child was broken, though no mark, even, was made on the leg of the mother. This occurring under my own observation is sufficient to cause me to disbelieve that any particular time of gestation is more favorable to cause responsive effect on the embryo and fœtus than another."

AMERICAN GRADUATES IN MEDICINE IN 1881.—Jefferson Medical College (Phila.), 205; University of the City of New York 191; Rush Medical College (Chicago), 172; University of Nashville and Vanderbilt University, 168; College of Physicians and Surgeons (Baltimore), 154; Bellevue Hospital Medical College (N. Y.), 117; University of Pennsylvania, 110; Medical College of Ohio (Cincinnati), 103; University of Louisville, 100; Indiana Medical College (Indianapolis), 85; University of Maryland, 73; Louisville Medical College, 54; Nashville Medical College, 53; University of Buffalo, 48; Chicago Medical College, 45; Miami Medical College (Cincinnati), 34; Cincinnati College of Medicine and Surgery, 30; Michigan College of Medicine (Detroit), 28; Hospital College of Medicine (Louisville), 24; Woman's Medical College (Chicago), 17.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, May 2 and 16.
West Chicago Medical Society—Mondays, May 9 and 23.
Biological Society—Wednesday, May 4.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.
Mercy Hospital—2 p. m., Surgical, by Prof. Andrews.
Rush Medical College—2 p. m., Dermatological and Venereal, by Prof. Hyde.
Woman's Medical College—2 p. m., Dermatological and Venereal, by Prof. Maynard; 3 p. m., Diseases of the Chest, Prof. Ingals.

TUESDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—2 p. m., Medical, by Prof. Quine.

WEDNESDAY.

Chicago Medical College—2 p. m., Eye and Ear, by Prof. Jones.
Rush Medical College—2 p. m., Medical, by Dr. Bridge; 3 p. m., Ophthalmological and Otological, by Prof. Holmes; 3:30 to 4:30 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.

THURSDAY.

Chicago Medical College—2 p. m., Gynæcological, by Prof. Jenks.
Rush Medical College—2 p. m., Diseases of Children, by Dr. Knox; 3 p. m., Diseases of the Nervous System, by Prof. Lyman.
Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.
Woman's Medical College—3 p. m., Surgical, by Prof. Owens.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—2 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn; 3 p. m., Orthopœdic, by Prof. Owens.
Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.
Woman's Medical College—11 a. m., Ophthalmological, by Prof. Montgomery; 2 p. m., Gynæcological, by Prof. Fitch.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.